Address
IN
SURGERY.

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(*Concluded from p. 237.*)

LET us next proceed to consider the ultimate and practical question of results.

4. *Comparative View of the Results of Treatment at the Two Selected Periods.*—Under imperfect sanitary conditions, without special isolation wards, with less attention to the details of ward management and to their cheering influences, with fewer scientific means of diagnosis, with no chloroform or ether, and no hypodermic method of quelling pain or other nervous disturbance, with simpler instruments, and less recondite dressings and appliances,—were the results obtained in 1844-5 inferior to those realised in the same hospital, under other conditions, in 1883? The reply is "yes" in certain particulars, but not in all. In the first place, I find that, as well as I can determine, the average period of stay of a surgical patient in the hospital in 1844-5 was 28½ days in the female wards and 29½ days in the male wards; whereas in 1883 it was about 26 days for the female and 21 days for the male patients, this latter smaller ratio being due to the disproportionate number of simple fractures occurring in the male sex. Too much stress, however, must not be placed on these figures, since the total number of cases is not sufficient to neutralise the effect of important differences in the severity of the cases, whether in kind or degree. Partly on a similar ground, but also on account of the different values assigned by different persons to the terms "cured," "relieved," and "discharged as incurable," I refrain from recording, in regard to such general results, figures which would be unreliable or actually misleading. For example, in the older records cases of caries of bone, stricture of the urethra, epithelioma, and scirrhus, are entered as having been "cured," and in the later set as being only "relieved," by operative treatment. Even the ratio of mortality is deceptive, although it shows an advantage on the side of the later period, the percentage of deaths in 1844-5 being 7·5 for the males and 6·5 for the females; whilst in 1883 these were about 5·75 and 5·74 respectively. But here the fatal cases of the two periods are not commensurable, and a single accidental death—as, for example, from a burn—completely vitiates the result. Hence a comparison of the treatment and its consequences, in distinct classes of injuries and diseases, will be found much more just and more instructive.

(A) The chief point to be noted in regard to differences in the management of simple fractures consists in this: that those of the leg and thigh were formerly retained longer in McIntyre's or Desault's splints before they were put up in starch apparatus, of which Liston was a great advocate. Patients so injured were therefore detained longer in the hospital then than now. The introduction of the plaster-of-Paris treatment has still further abridged the time during which a bed is occupied with a case of broken leg, patella, or femur. Wiring of bones was not attempted. Compound fractures proved to be very prolonged cases, and those of the lower limb were often fatal, with or without amputation.

(B) Injuries not involving a breach of the surface of the body, simple inflammations consecutive to these, or so-called idiopathic local inflammations which come under the care of the surgeon, such as sprains, simple dislocations, synovitis, orchitis, and other cases, were not less satisfactorily treated in 1844-5 than in 1883, and the progress of the patients towards recovery was quite as rapid. Venesection is not mentioned in Liston's case-books, but cupping and leeching were in the ascendant. A patient with disease of the hip-joint, requiring at the time only the application of Liston's famous leather splint, informed her dresser that she had previously had 141 leeches applied around her hip in the course of three months. A man with acute synovitis of the knee was ordered eighteen leeches over the joint on the day of his admission, eighteen more on the day after, eight on the tenth day, and ten on the twentieth day, and a week afterwards was discharged convalescent. For a condition described as "mania" from head-injury, a cupping to twelve ounces was ordered to the back of the neck, followed by two sets of leeches, twenty each time, to the temples, and, five days later, by a blister and the administration of calomel, and so a cure was effected. Inflammatory urethral stricture, prostatitis, and supposed cystitis were relieved by free cupping on the perineum; and so in many other diseases. Whether these sanguinary proceedings were necessary or even beneficial, and whether the local abstraction of blood is now too much neglected in cases of acute inflammation, especially of important organs, are problems which I cannot here discuss.

(C) In comparing the older and the more recent management of inflammations which end in suppuration, ulceration, or gangrene, or in combinations of these morbid processes, we meet with facts more or less unfavourable to the older practice, and unmistakably cumulative in support of the advantages of modern—that is, of aseptic—surgery.

Acute abscesses were treated by very free incisions, with ultimate success; but suppuration continued for many days, and the abscess cavity was filled up slowly. Nor were there wanting instances of more serious evils. Erysipelas and further abscesses often supervened. A patient with successive abscesses in the abdominal walls, due presumably to caries of the ilium, is recorded to have left the hospital on the thirty-second day, and to have died a few days afterwards. An acute abscess in the head of the tibia, opened with the trephine, was seventy-seven days in healing. Abscesses and sinuses around, but not communicating with, the hip-joint, are mentioned as not having become closed when the patient was discharged from the wards after the expiration of eighty-three days. Lastly, an acute abscess in the knee-joint proved fatal, from distinct pyæmia, on the forty-seventh day, purulent deposits being found in the lungs after death. It is hardly necessary to state that poultices, and not antiseptic dressings, were employed; and, although counter-openings were freely practised, no drainage-tube was in use; and the abortive treatment of moderate-sized abscesses by aspiration and the injection of morphia, carbolic acid, or iodoform was unknown.

Ulcers of the integuments, which usually are not prone to allow infective absorption, were very well managed in Liston's wards. Rest, elevation, and his favourite water-dressing, consisting of wetted lint covered with oiled silk, cured most cases. All greasy applications were rigorously forbidden, for against these Liston waged an angry war. A spreading ulcer with fetid discharge was treated with a lotion of chlorinated soda or a weak solution of iodine, both strongly antiseptic and germicidal agents. Red wash, which probably acts in both these ways, as well as a local stimulant, nitrate of silver, and sulphate of copper, were used as now. Strong nitric acid was applied against phagedæna; solutions of chlorine and iodine against slight sloughings and actual gangrene.

Periostitis, osteitis, caries of bone and necrosis, were treated successfully, as now, by subcutaneous incisions, trephining, the extraction of sequestra, and scooping. In one report the dresser mentions an instrument under the name of a "proper scoop," which, I assume, was really a "sharp scoop."

Venereal diseases were treated without mercury, or with as small doses as possible, in accordance with views which had then been ably propounded; and as no distinction was made between the hard and the soft sores, so far as their possible consequences were concerned, whilst the majority of those taken into the hospital were evidently soft chancres followed by bubo, the non-specific, or almost non-specific, treatment was very successful. Iodide of potash was becoming a favourite remedy; but it is curious to observe that a common formula in the notes was one grain of blue pill and one grain of iodide of potash, combined in one mass, to be taken three times a day. When the iodide was administered alone, the usual dose was three grains three times daily; very seldom did it reach to four or five grains. In deep syphilitic ulcerations, and in sloughing gummata, a weak solution of iodine was commonly ordered as a lotion. Numerous cases of syphilitic caries and necrosis were admitted, and one of extensive disease of the parietal bone ended fatally, with abscess in the corresponding part of the brain.

(D) *Wounds.*—Passing by burns, scalds, and injuries from caustics, I proceed to consider the cases of wounds of greater or less severity, twenty-eight in number, which were received into Liston's wards in the year in question. Four of these occurred to women. One only healed within a week, and, as stated in the notes, "by the first intention"—namely, a wound in the palm, involving the superficialis volæ and another small artery; a cut down to the patella granulated and suppurated, and healed favourably in seventeen days; an abrasion over the shoulder led to erysipelas and axillary abscess, the patient leaving the hospital on the eighteenth day; the fourth and last case, a punctured wound in the foot, became complicated with abscesses in the foot, leg, and thigh, and was detained in the ward for fifty-five days. Of the twenty-four examples of wounds happening to men, four only healed, presumably by the first intention, in from five to nine days; these were wounds affecting, respectively, the ear, eyelid, scalp, and scrotum, the last one laying bare the tunica vaginalis. In six other cases very free suppuration with accompanying fever ensued—namely, in a wound of the scalp, a contused wound of the eyelid and eyebrow, a glass-cut of the forearm, a long split in the perineum, a lacerated wound of the foot, and, lastly, a scalp injury requiring counter-openings; in these cases healing was deferred to from fifteen to twenty-eight days. In the remaining patients still graver complications ensued; they may be briefly summarised thus: Punctured wound of thumb; erysipelas; patient, being in good circumstances, was sent out on the eighth day. Bite on the back of knuckle; erysipelas, abscess; discharged on the twenty-first day. Slight wound in butcher's hand; cellulitis, abscess in forearm and arm; twenty-two days. Contused wound of leg; rigors; abscesses; thirty days. Wound of ulnar and another smaller artery above the wrist; ligature; cellulitis; sloughing of fascia up the forearm; thirty-two days. Lacerated wound of palm; abscess, sloughing, much fever; thirty-four days. Punctured wound of thumb; suppuration, frequent rigors; thirty-nine days. Contused wound of ear and side of head; so-called "erythema," suppuration; forty-two days. Punctured wound of thigh; profuse hæmorrhage, suppuration, burrowing of pus; forty-five days. Attempted suicide; division of brachial artery at bend of elbow, cellulitis, sloughing of areolar tissue, severe fever, fifty-four days. Gunshot wound of forearm without fracture; deep suppuration, with great fever; fifty-eight days. Lastly, two fatal cases—namely, a lacerated wound of the leg, erysipelas, rapidly spreading diffuse cellulitis, gangrene, and death on the eighth day; and a cut throat, dividing the trachea, followed by bronchitis and infective pulmonary abscesses, proving fatal after sixty-one days. These cases, the only ones admitted, are surely sufficiently striking; but we have yet to consider the results of the cutting operations performed in the hospital during the twelve months of 1844-5.

(E) *Operations.*—Five cases of lithotomy, four of herniotomy, and one of perineal section for laceration of the urethra, all successful, afford evidence of Liston's skill as an operator; and, as regards the duration of the cases, three of the lithotomies were cured within the month, one on the thirty-third day, and the remaining one, an elderly patient with large stone, on the fifty-third day. One of the hernia cases was discharged cured on the ninth day, one on the twentieth, another on the thirtieth, but one not until the forty-seventh day. The perineal section was closed on the twenty-eighth day. A case of phimosis in a boy required twenty-four days to cicatrise; and another, in an adult, was followed by erysipelas, severe rigors, and bubo, and was healed only after thirty-nine days. Fistulæ *in ano* behaved as now; but one patient thus afflicted died on the seventh day after the operation from pulmonary complications. Two cases of extravasation of urine were unavoidably fatal, in one of which minute abscesses were found in both kidneys.

For the removal or excision of new growths, twenty-one operations were performed in the year 1844-5—eight upon men and thirteen on women. They may be thus briefly detailed. Male cases: three—namely, a small epithelioma of the tongue, epithelioma of the lower lip, and a small thyroid cyst—healed by first intention by the end of a week; two—namely, a larger thyroid cyst, and a broad epithelioma of the lower lip—healed with granulation in nineteen and twenty days; three—namely, a parotid tumour, a cystic sarcoma of the testis, and a large lymph-cyst of the neck, all attacked by erysipelas—were cured in twenty-nine, thirty-four, and fifty days respectively. Female cases: five fatty tumours, the wound in four healed by granulation on the twelfth, eighteenth, twenty-fourth, and fifty-seventh days; and in the fifth, a succession of rigors on the first, third, and fourth days, with offensive discharges, the patient was sent out of the hospital on the fourteenth day, and died seven weeks later; five mammary tumours, one a cystic tumour, patient left the hospital doing well on the fourth day; the others—namely, a painful tubercle, two sarcomas with cysts, and a scirrhus—healed by granulation and suppuration, twenty-one to twenty-eight days; a large parotid tumour, followed by abscess and profuse suppuration, thirty-two days; and, lastly, a large thyroid body, seton inserted for ten days, suppuration, intense fever, fifty-seven days. To these cases, I must now add that of a very large ovarian tumour, of three years' duration, tapped once before; operated on, in the words of the case-book, "in Mr. Liston's usual manner"—that is, "by a previous incision into the abdomen," "the introduction into the cyst of a large trocar and cannula"; "thirteen quarts of a dark-coloured glutinous fluid" evacuated, some more afterwards squeezed out, wound closed; next day pain and vomiting; on third day decided peritonitis; treatment by leeches, fomentations, opium, calomel, hydrocyanic acid, and creasote; incessant vomiting, exhaustion, and death on the twenty-second day. Post-mortem: peritoneal cavity contained "three pints of purulent-looking fluid, with portions of badly-formed lymph floating in it"; "cyst partly refilled," with "*soft* adhesions to adjacent parts." In Liston's Elements of Surgery (edition 1840) ovariotomy is denounced, from contemporary experience, as an "unjustifiable piece of butchery!" How this has all been changed by cautious, and, if I may coin a word, *pre*cautious surgery!

In two subcutaneous operations, one for a contracted toe, and another for displacing a loose body from the knee-joint into the areolar tissue outside the capsule, the wounds healed at once without suppuration; but in a third, for dividing the proper extensor tendon and the long flexor tendon of the great toe, abscesses and ulceration detained the patient sixty-nine days in the ward. Of plastic operations, Liston's great pride, a divided hare-lip united before the end of a week, and an example of webbed fingers healed in a fortnight; but four operations on the face for pendulous upper eyelids, cancrum oris, partial destruction of the nose and upper lip, and complete loss of the nose, required for the healing process thirty-three, forty-two, forty-three, and sixty-six days respectively. An operation on the scrotum, designed to cover a testis exposed by gangrene, necessitated treatment for fifty days. Ten amputations and one excision of a joint are also recorded. First, four female cases: compound dislocation of finger, erysipelas, abscess in axilla, thirty days; diseased phalanges and joint of finger, erysipelas, abscess in axilla, twenty-nine days; excision of elbow-joint, ends of humerus and ulna removed, abscesses and extensive burrowing of pus up and down the limb, eventual good result, ninety-three days; large "bleeding sarcoma," or "fungus hæmatodes," springing from integuments of the forearm, three or four years' duration, lately rapid growth, axillary glands sound; amputation above elbow, rigors on seventh day, discharges very offensive, abscess in axilla, with similarly offensive pus, sweatings, emaciation, jaundice, made out-patient on sixty-ninth day, death one month afterwards. Male cases, seven: compound fracture of finger, healed in sixteen days; badly crushed finger, so-called "erythema," abscess in palm, patient discharged on twentieth day; comminuted fracture of finger, cellulitis, deep subfascial suppuration along the forearm, fifty-nine days; disease of tarso-metatarsal joint of great toe, removal with internal cuneiform bone, prolonged suppuration in foot, ninety-two days. There remain three major amputations, all fatal. First case: a buffer accident, compound fracture of tibia and fracture of head of fibula into the knee-joint on the right limb, fracture of tibia with lacerated wound of the leg on the left limb; primary amputation of the right limb above the knee; progress favourable for three days, then some hæmorrhage, left limb became much discoloured; rapid exhaustion, followed by death on the eighth day. Post-mortem: collection of pus around cut end of femur, and extending as high as great trochanter; yellow line of demarcation on left leg; internal organs not examined. Second case: sarcoma of leg, originating in a cicatrix from burn; amputation above knee, profuse suppuration, separation of flaps, hæmorrhage, general oozing; death on the sixth day. Third

case: sarcoma springing from front of tibia, amputation through knee-joint, patella and cartilage on end of femur left; good progress for five days; on the sixth day a slight rigor; on the ninth day severe rigors; on the eleventh day another rigor, with profuse sweatings, discharges fetid, flakes of loose cartilage coming away; on the thirteenth day another rigor, subsequently several others less severe, and death on the seventeenth day. No post-mortem examination, but the case was typically pyæmic.

In the case of aneurysm of the femoral artery, in which the temperature of the two limbs was registered by aid of a thermometer, as the tumour reached above Poupart's ligament, it was necessary to tie the external iliac artery. On the third day swelling and so-called "erythema" appeared around the wound; the patient had dyspnœa, a rapid pulse, restlessness, and delirium; the temperature between the toes of the affected limb, which became dusky, was gradually lowered to 84°, 72°, and 64°, as compared with 93°, 97°, and 78° between the toes of the sound limb, the temperature of which, be it observed, also fell; the patient succumbed, apparently septicised, on the sixth day.

The picture thus finished of the results of the surgical practice in Liston's wards in 1884-5 is full of instruction. The separate mention of individual cases, all of which I have read from beginning to end, serves to enforce the lessons they teach. In the light of present knowledge, the frequency of grave inflammatory complications must be attributed to removable or corrigible conditions, which would have been prevented or minimised by more effectual sanitary arrangements, by the isolation of infective disease, and by strict antiseptic precautions.

It will have been noticed that in cases of injury or disease not involving a breach of the surface of the body, and in cases in which, as in operations in the perineum or ischio-rectal fossa, antiseptic dressings are not available, the results of the older practice are quite upon a level with those of modern experience. Even in regard to ulcers this is also true. But in the case of recently opened abscesses, and especially of open wounds, whether accidentally or intentionally inflicted by the surgeon in his operations, in which the delicate walls of divided and exposed bloodvessels, the cut or lacerated surfaces of the interstices of the areolar tissue, and the torn and irritated lymphatics are helpless to resist the entrance into the system of infective fluids and organisms, we find that prolonged suppuration, erysipelas, cellulitis, lymphangeitis, pyæmia, and septicæmia, as it were, dogged the footsteps and foiled the handiwork of the most skilful operator of his time.

We have seen that all abscesses, when opened, continued to suppurate freely; whilst in four cases (fourteen being the total number) grave complications arose, one case ending fatally. Again, of twenty-seven cases of accidental wounds, only five healed quickly by the first intention, seven by granulation and free suppuration, and thirteen after prolonged suppuration, cellulitis, or erysipelas, whilst two terminated in death. Lastly, of fifty-four wounds made in operations, eight only united by the first intention, twenty-six closed after granulation and free suppuration, fourteen were cured after the occurrence of erysipelas or cellulitis with secondary abscess, and (excluding two unavoidable deaths from extravasation of urine) four died of septicæmia or pyæmia. It must be within the experience of every living hospital surgeon that no such calamitous results follow his own practice. It is unnecessary to quote here in detail the number and kinds of cases treated in my wards in the year 1883; but the facts relating to those cases, which are carefully reported, show indisputably that abscesses, both acute and chronic, treated by incision, proper drainage, and antiseptic dressings, heal with much less subsequent suppuration and in less time than under the open treatment; that accidental wounds, maintained in an aseptic condition, are far less frequently followed by serious complications than formerly happened; and that operation wounds of all kinds heal more quickly and kindly under antiseptic treatment. By way of illustration, it may be mentioned that in twenty-four operations for the removal of new growths, the wounds were healed in five cases between the seventh and tenth days, in seven cases between the fourteenth and twentieth days, in seven cases between the twenty-fifth and thirty-fifth days, and in four cases between the forty-third and fifty-fifth days, and in one only, a case of a double operation on a cancerous penis, on the seventy-third day. It must also be added that in no instance was there more than a show of suppuration, and that no case of erysipelas, infective cellulitis, septicæmia, or pyæmia arose during the year in question, in the wards under my care. Yet these diseases were not absent from the hospital, for three cases of pyæmia, one of septicæmia, and five of erysipelas originated in other wards; whilst sixteen cases of erysipelas or infective cellulitis were admitted from outside into the proper erysipelas wards. It must, in justice to the older period, when there were no isolation wards, be granted that some of the cases of injury complicated with erysipelas were already so affected on their admission; but most of those cases, and all those following on operation wounds, arose within the hospital, making a total of at least twenty-four cases of septic disease arising in Liston's wards in 1844-5, as against none arising in my wards in 1883. It is easy to trace, in these older records, the frequent and long-acknowledged coexistence of endemic and hospital erysipelas to which a recent joint Franco-German surgical commission of inquiry into the effects of that disease has directed attention; and, indeed, it may be said that in Liston's time not only did inflammation, which, like fire, may be a good servant but is a bad master, attack every wound, and free suppuration, which if not a combustive is an exhaustive process, run riot in the wards,—but the demon of erysipelas, which so often gained an entrance therein, if it did not strike all the patients, at least hovered over every bed. Its vagaries were well understood; its advent took no one by surprise; and there was one bed in particular, in the corner of a certain ward, in which it most frequently seized its victim. This familiarity with it in hospital practice explains perhaps the promptitude and, judging from the number of recoveries which followed it, the success with which it was treated when it occurred. But neither it, nor other septic diseases, nor the tendency to undue suppurative inflammation, were efficiently prevented.

On general principles, every surgical patient was subjected, almost *in limine*, to the inevitable purge, consisting of the nocturnal dose of blue pill or calomel, with colocynth and henbane, and a choice between castor oil or a black or white saline draught in the morning. Subsequent fever was treated by salines, often combined, even in the later stages, with antimonial wine, and sometimes with the then new remedy, aconite; rigors, sweatings, and exhaustion were combated with ammonia or mineral acids, administered in decoction of bark.[1] In the meantime, complete purity of the surroundings, absolute surgical cleanliness, and the exclusion of all noxious substances were not strictly aimed at or attained. Sanitary vigilance was dormant, or did not exist; and the dressings—the famous water-dressings, alas!—were doubtless the constant, innocent, but not innocuous vehicles of infection. Liston, as is well known, denounced all resinous plasters as "dirty applications," and all ointments as "greasy abominations," prefixing to these appellations a strong characteristic epithet. Isinglass plaster, wet lint, and oiled silk, were no doubt neat, and to the eye cleanly; but they were not aseptic. Lint "stuffed" into open abscesses, sinuses, and carious cavities, or placed for a few hours between the flaps after an amputation, would certainly contain organised or unorganised extraneous particles, and the water with which it was moistened, surely not previously boiled, would also contain them. The heat and moisture of the living tissues, and of the exudations from them, would favour the development of germs, as well as the formation of lifeless but injurious chemical compounds. To us the consequences are clear. No change of dressings, however frequent, and no occasional use of chlorinated lotions or iodised solutions, would cleanse effectually the microscopic but Augean recesses of the injured tissues. Hence, more or less suppurative action ensued, and more or less deadly agents of infection gained an entrance into the vessels and the blood. Asepticised air, hands, instruments, and sponges, together with all the varieties of aseptic short ligatures, sutures, and dressings, form a remarkable contrast to Liston's means of treatment. It would be untrue, and a calumny against Nature, to say that these and other antiseptic agencies are everywhere, and at all times, indispensable necessities of surgical practice. As narrated to me by a French surgeon, an eye-witness to the facts of an African campaign, an Arab's cheek, all but sliced off and hanging down, may be stitched up in its place, and bandaged with strips from his own cotton garments,

[1] "If morbid spot of septic sore invade,
By Heaven-sent bark the morbid spot is stayed."
(From Rev. Sidney Smith's "Poetical Medicine Chest.")

and will then unite by the first intention, with scarcely a drop of exudation; and I have been told of a gentleman colonist in Australia, who cut open his knee-joint in felling a gum-tree, sewed up the wound himself, and put on a back-splint, before the nearest surgeon, who resided sixty miles off, could arrive, and was cured "straight off" without suppuration, preserving a perfectly useful limb. Union by the first intention occurred long before the antiseptic system was devised; and it occurs still without its aid. But in formidable operations anywhere, and in most operations in hospitals, it is a safe provision, and therefore incumbent on surgeons to adopt. In this view adequate hospital expenditure for antiseptics is fully justified. Their employment shortens the period of cure, limits the amount of suppuration, diminishes the drain upon the bodily strength, lessens the risk of complications and the chances of future organic degenerations, and thus contributes to a more rapid, complete, and lasting recovery. As anæsthetics encourage patients to submit more frequently, willingly, and hopefully to more and more serious operations, so antiseptics have emboldened surgeons to attempt, and enabled them to succeed in, enterprises formerly considered hopeless and unjustifiable. When I remember Liston's grave and despairing looks at his too frequent disappointments, I welcome the confident glance and triumphant expression of many a modern operator.

Of the three great cavities of the body, the abdomen, with its membranous coverings, the least protected and most accessible, containing parts less immediately essential to life, and yet, from its size and the extent of its lining membrane, the most prone to a rapidly fatal inflammation, was the first to be entered by the properly aseptic hand; next, the thorax, with its half-bony and half-membranous walls, and therefore better protected and less open to access, containing parts more immediately necessary to life, but lined by a membrane of smaller extent, and subject to less formidable inflammatory reaction, yielded entrance to the antiseptic method of procedure; and, lastly, the cranio-spinal cavity, the smallest, the most perfectly enclosed, the best protected, enclosing organs of vital essentiality, and yet lined by a membrane of moderate proclivity to disease, has also been invaded by the new surgery, under the guidance of an improved diagnosis, in search of removable disease. Even the cervical region, which, though not designated a cavity, is, nevertheless, a specially adapted part of the general cavity of the body, has become the field for the employment of aseptic methods. It might thus seem as if surgical enterprise and skill, applied to the trunk as contrasted with the limbs, had reached their utmost attainable limits; but it cannot be so. Already the cry is for still greater security against the consequences of irritant and septic influences. That this will be obtained in the future no one can doubt. Forty years since Liston was deprived of our present advantages and suffered accordingly; but his dexterity and fame as an operator, his desire to simplify all surgical proceedings, his lasting devotion to and sound knowledge of anatomy, and his interest in the then opening science of pathology, require no vindication at my hands. May the next forty years witness as great advances as have been realised since his death; and in that future may the reputation of British surgeons and the triumphs of British surgery be maintained by our successors with undiminished lustre.

ON

THE ETIOLOGY AND PATHOLOGY OF THE SO-CALLED "DENTIST'S LEG."

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AT the meeting of the Odontological Society in June, 1884, Mr. Oakley Coles read an interesting paper on the "Maintenance of Health amongst the Practitioners of Dental Surgery."[1] The reading of the paper was followed by an instructive discussion, in the course of which mention was made of the pain in the back and legs resulting from over-fatigue in muscles which are engaged in maintaining the body for a long period in one constrained position. One speaker, Mr. Dennant of Brighton, said he had himself "suffered from what their medical friends were learning to call the 'dentist's leg.'" About two years since the pain became unbearable after standing three or four hours, resembling very much the application of scalding water to the outer part of the thigh in the region of the external cutaneous nerve. It seemed to be due to nervous exhaustion from the undue strain thrown upon the part. Medical friends and common sense suggested rest as the remedy, and this he secured by means of the Lyons stool. He had used this for about two years with great benefit, and could now get through a day's work with comparative comfort.

Some time since I had my attention directed to this subject in consequence of having been consulted by a dentist, about thirty-five years of age, who described to me a sensation of numbness in one thigh, which he feared might be a precursor of paralysis. I soon, however, relieved him of his anxiety by giving him what I have no doubt is the true explanation of the perverted sensation. Our every-day experience teaches us that over-strain and fatigue may be direct causes of pain in the muscles concerned; but, besides this, the long-continued rigid contraction of the muscles which are engaged in maintaining such a fixed position as the operating dentist often has to assume must greatly impede the circulation, not only through the muscles, but also through the integuments. As the alternate contraction and relaxation of the muscles—in walking, for instance—assists and quickens the circulation, so the state of fixed and rigid contraction must obviously impede and retard the circulation, by exerting a continuous pressure upon the bloodvessels, and more especially upon the soft and easily compressed veins. The impeded circulation affects not only the muscles, but also the skin and subcutaneous tissues, and the nerves which supply the different tissues; and one result of a defective circulation through the nerves is to cause various perverted sensations—such as numbness, a sensation of "pins and needles," or a painful feeling of heat and scalding. The immediate cause, then, of the painful sensations experienced and so graphically described by Mr. Dennant appears to be, not, as he suggests, "nervous exhaustion," but perverted nerve function, directly due to a mechanical impediment to the circulation through the rigidly contracted muscles and their associated nerves. It is probable, too, that direct compression of the nerves by the firmly contracted muscles may have some influence in the causation of the perverted sensations referred to the cutaneous terminations of the nerves.

I have often been consulted by men and women beyond middle age who have been alarmed by a feeling of numbness, or "pins and needles" in the extremities. In these cases the defective circulation, which is the direct cause of the perverted sensation, is often the result of an enfeebled condition of the heart, with or without excessive general obesity, and often with more or less general emphysema of the lungs.

To return to the "dentist's leg." The obvious means of prevention and of cure consist in rest for the over-strained limb, or such a frequent change of position as is equivalent to a certain amount of rest. Standing in one position is notoriously more fatiguing than walking, and for the obvious reason that while in standing one set of muscles is in a constant state of active contraction, the circulation through them being thereby retarded and enfeebled, walking involves alternate contraction and relaxation of the muscles, with an invigorated and quickened circulation.

More than one speaker during the discussion referred to the benefit to be derived from some form of active muscular exercise after the day's work. It is probable, too, that systematic friction and massage of the affected limb would be beneficial.

Savile-row, W.

[1] Transactions of the Odontological Society of Great Britain, vol. xvi., No. 8, new series.

ESSEX CONVALESCENT HOME.—The first annual meeting in connexion with the Essex Convalescent Home at Clacton-on-Sea was held at the Royal Hotel, Clacton, under the presidency of the Right Hon. Sir H. J. Selwin-Ibbetson, Bart., M.P., who spoke of the year's work as having been a decided success, both as to work done and as to funds. The committee had wisely not restricted the Home to Essex people, but opened it freely to all comers; and he hoped that as its reputation extended it would receive a still larger degree of support.

ON THE

OVA OF MAN AND THE MAMMIFERA BEFORE AND AFTER FECUNDATION.

HISTORICAL NOTICE OF THE DISCOVERY OF THE GERMINAL VESICLE OF THE MAMMIFEROUS OVARIAN OVUM, AND OF THE RECOGNITION OF A SUPERADDED INVESTMENT AROUND THE OVUM OF THE RABBIT AS IT PRESENTS ITSELF IN THE FALLOPIAN TUBE AFTER IMPREGNATION: A SINGLE-HANDED STRUGGLE AGAINST THE WHOLE SO-CALLED "SCIENTIFIC WORLD" OF LONDON FIFTY YEARS AGO.

Dedicated to the Scientific World of the Present Day.

BY T. WHARTON JONES, F.R.C.S., F.R.S.

INASMUCH as without a knowledge of the ovum in the unimpregnated state it is not possible to understand the changes it undergoes in consequence of fecundation, so the discovery of the ovum of the mammifera in the ovary must be viewed as the first great step towards the elucidation of generation and development in that class of animals. But as the exact homology of the object discovered in the Graafian follicles of the ovary was at first mistaken, the detection in it of a cell corresponding to the germinal vesicle of the bird's ovarian ovum and a demonstration that the "zona pellucida" is the optical expression, under the microscope, of the circumferential doubling of a thick transparent vitellary membrane, by establishing its real import as an ovum, must be viewed as the second great step towards the same important end. A third great step was the recognition, as a superaddition to the ovarian ovum, of the investment around ova found post coitum in the Fallopian tube of the rabbit.[1]

Discovery of the ovum of the mammifera as it exists in the Graafian follicles of the ovary ante coitum.—The ovarian ovum of man and the mammifera was, as is well known, first discovered by the late Professor Carl Ernst von Baer, of St. Petersburg, nearly sixty years ago. Shortly before that, the late Professor Purkinje of Breslau had discovered in the ovarium ovum of the bird (which consists of the yelk and vitellary membrane) a microscopical vesicle or cell at that part of the yelk where, after fecundation, the cicatricula and first traces of the chick present themselves. This cell Purkinje described under the name of "germinal vesicle." The Graafian follicles of the ovaries of the mammifera were formerly vaguely supposed to be themselves the ovarian ova. Their granulous contents, indeed, have some resemblance—but a resemblance only—to the ovarian ovum of the bird, though their wall is truly the homologue of the capsule in which that ovum is contained. On account of this resemblance, probably, von Baer was led to compare the object he discovered among the evacuated granulous contents of a Graafian follicle to the vesicle which Purkinje had discovered in the ovarian ovum of the bird. In addition to this mistaken view of its homology, von Baer supposed the object discovered by him to have something of the characteristic of an ovum also, as well as of that of a germinal vesicle. And it appears to have been under the confused impression that, though not quite an ovum, it yet had something of the character of an ovum, rather than in reference to the actual minuteness of its size (which is about $\frac{1}{115}$th of an inch in diameter), that he designated the object "ovulum." Having traced the true homologies of the object discovered by von Baer in the Graafian vesicle, I was the first to substitute the name "ovum" for "ovulum" by which to designate it. Dr. Martin Barry was the next to use the name "ovum," but he did so on erroneous grounds. That the object discovered by von Baer among the granulous contents of Graafian follicles must itself be a complete ovum subsequently came to be conjectured, and was ere long proved by the discovery within it of a cell comparable to the germinal vesicle discovered by Purkinje in the ovarian ovum of the bird. The homology between it and the whole ovarian ovum of the bird was thus completely established. The granular mass contained within the minute ovarian ovum of the mammifera was correctly recognised as homologous with the yelk of the bird's egg. Respecting the signification of the broad transparent ring, or zona pellucida, as seen around it under microscopical examination, there was less unanimity of opinion. Now, however, it is acknowledged to be the optical expression, by transmitted light under the microscope, of the circumferential doubling of a thick transparent membrane enclosing the yelk. This account of the signification of the zona pellucida was first stated independently of each other by M. Coste and myself. Professor Bischoff subsequently maintained the same view, but fell into error when he attributed it to von Baer, who, on the contrary, described the zona pellucida as owing to a transparent interval between a thin external membrane and the yelk. Professor Valentin followed Baer in this erroneous view, and supposed the transparent interval to be filled with a clear fluid. Professor Rudolph Wagner at first entertained a similar mistaken opinion, but afterwards admitted the matter to be as stated by Coste and myself. Could any doubt have remained on the point, the following *experimentum crucis* which I made when first investigating the subject was calculated to settle it.[2] I tore open with fine needles an ovum, disposed under the simple microscope, and spread out sufficiently well a portion of the zona or external envelope. By this manipulation I ascertained, both by sight and indirect touch, that I had to do with a thick transparent membrane. Continuing the delicate manipulation with the instruments, I next folded the spread-out membrane on itself, whereupon the appearance of the zona pellucida was seen at the doubling. By manipulating a piece of the vitellary membrane of the ovarian ovum of the bird in the same way a similar appearance was produced. The thick transparent external membrane of the ovarian ovum of the mammifera, by being seen doubled on itself at the circumference of the ovum, thus gives rise to the appearance called "zonula pellucida." Is it homologous with the vitellary membrane of the bird's egg, or is there, in addition to it, another membrane entitled specially to the name of "vitellary"? The great importance of this question in reference to the tracing out of the future development of the ovum was nearly fifty years ago forcibly insisted on by myself when combating the erroneous views of the late Dr. Martin Barry on the subject, which were promulgated with the support and encouragement of the "Royal Society of London for *promoting* Natural Knowledge" and of all the "scientific world of London"—that is, a clique of the professing physiologists in London, who had got virtual possession of the Royal Society, and arrogantly pretended to decide what ought and what ought not to be considered facts in nature without themselves knowing anything whatever of the subject, for lack of original investigations of their own. Abroad, the late Professor Bischoff insisted on the same point and adopted my view of it.

Before attempting to answer the question just proposed let it first be inquired what constitutes a vitellary membrane. The ovarian ovum of the bird, we have seen, consists of the yelk with the embedded germinal vesicle on one side, surrounded by a transparent homogeneous structureless-looking membrane. This membrane is in immediate apposition to the inner surface of the ovarian capsule, there being no granulous matter interposed between the two, as in the ovarian ovum of the mammal. The yelk of the laid bird's egg is, as is well known, immediately surrounded by a transparent homogeneous structureless-looking membrane, which is identical with that just mentioned as surrounding it while still in the ovary. It was to this that the name of "vitellary" membrane was originally given, and any part of the mammiferous ovarian ovum to be entitled to the same appellation must be homologous with it in all its essential relations. That the thick transparent external membrane of the mammiferous ovarian ovum is the part homologous with the vitellary membrane of the bird's egg was maintained by myself, and assented to by Henle, Bischoff, and others. Besides, notwithstanding what was said to the contrary by Valentin, Wagner, Barry, and Meyer, there is certainly no other membrane of the mammiferous ovum in the ovary to which the name of "vitellary" could be given.

It is above remarked that Bischoff was inaccurate in saying that Baer described correctly the signification of the zona pellucida. To this it must be here added that he

[1] See my "Report on the Ovum of Man and the Mammifera, before and after fecundation," in the British and Foreign Medical Review, vol. xvi. p. 513, 1843.

[2] See my paper "On the Ova of Man and the Mammifera," communicated to the Royal Society in the beginning of 1835, and published in abstract in the Proceedings of the Royal Society for June, 1835. It subsequently appeared in full in vol. xxi. of the Medical Gazette.

was equally inaccurate in the account he gave regarding Baer's views of what constitutes a vitellary membrane. Baer, in fact, considered the outer membrane of the ovarian ovum as homologous with the membrane of the shell in the bird's egg, and he accounted for a vitellary membrane by conjecturing that there forms on the outer surface of the yelk ball a thin pellicle—by "differentiation," I suppose, he meant, differentiation being a word imported by him into the vocabulary of development, and which has since come to be illogically employed by evolutionists as if, instead of being merely a word indicating steps observable in the development which goes on before our eyes, it represented a fact in proof of the evolution of organised and living bodies from the lowest to the highest in all their various species, genera, and classes by slow transmutation of structure and acquirement of corresponding vital endowments throughout millions of years, which they fancy and gratuitously assume to have taken place. But, as I originally observed, there is no such pellicle even as that conjectured by Baer, and every fact warrants the conclusion that the thick transparent external membrane of the ovarian ovum of the mammifera is the homologue of the vitellary membrane of the bird's egg, and does not correspond at all with the membrane of the shell of the bird's egg which is formed in the oviduct.

A reference to my original paper communicated to the Royal Society in 1835, "On the Ova of Man and the Mammifera as they exist in the Ovaries before Impregnation, and on the discovery in them of a Vesicle analogous to that described by Professor Purkinje in the Immature Egg of the Bird,"[2] and to my "Observations on the Ova of the Mammifera before and after Impregnation,"[4] criticising Dr. Martin Barry's "Researches in Embryology," will be found to confirm what I have here said of the mistake made by Bischoff in classing me with those who admit the existence of a membrane in the mammiferous ovarian ovum, in addition to the thick, transparent, external one, as entitled to the name of "vitellary."[3] So far, indeed, was I ever from admitting any such membrane myself that I criticised Barry in a very decided manner for doing so. I believe, in fact, that I was the first writer on the subject to maintain that the thick, transparent, external membrane of the mammiferous ovum is homologous with the vitellary membrane of the bird's egg in all its essential relations, before as well as after development.[5] Bischoff came to the same conclusion as that previously arrived at by myself—viz., that the yelk of the mammiferous ovum in the ovary, which is composed of a quantity of granules held together by a connecting substance, possesses besides the zona pellucida no other proper investment. The zona pellucida, or rather the membrane, on the circumferential doubling of which the appearance of zona depends, I argued, in short, ought to be named the "vitellary membrane."

Discovery of the germinal vesicle in the mammiferous ovarian ovum.—The capsule containing the ovarian ovum of the bird is, as above stated, homologous with the wall of the Graafian follicle of the ovary of the mammifera. In birds, however, the capsule closely embraces the ovum, consisting of the yelk with the embedded germinal vesicle and surrounding vitellary membrane; whereas in the mammifera the Graafian follicle contains a granulous fluid, and is immediately lined with what Baer designated "membrana granulosa." At the place corresponding to that where the Graafian follicle is prominent at the surface of the ovary this membrana granulosa is thicker, and forms what Baer designated "cumulus." In this cumulus the ovum is embedded. At first glance the contents of a Graafian follicle thus simulate an immature ovarian ovum of the bird, the membrana granulosa of the former resembling the exterior part of the yelk of the latter, though between this membrana granulosa and the wall of the Graafian follicle there is nothing in the shape of a vitellary membrane. It was therefore not surprising that von Baer mistook the object he discovered embedded in the cumulus of the membrana granulosa of the Graafian follicle for the homologue of the vesicle of Purkinje in the immature ovarian ovum of the bird. And, as the wall of the vesicle of Purkinje in the immature ovarian ovum of the bird is very delicate, it is also not surprising that von Baer erroneously interpreted the appearance of the zona pellucida as owing to a delicate boundary membrane and a space within it, filled with a fluid, as was afterwards supposed by Valentin also.

By the determination of the true character of the zona pellucida and the discovery of the germinal vesicle in the mammiferous ovarian ovum, the homology between the latter and the ovarian ovum of the bird, &c., was completely established, and Baer's mistake dissipated. This correct view of the matter had been suspected by Purkinje, but he and Valentin had in vain searched for a germinal vesicle, and it was only on renewing their investigations after the announcement that such a vesicle had been discovered in the rabbit's ovum by M. Coste that they, Wagner and others in Germany, were successful in finding it. M. Coste, therefore, as Bischoff has observed, must, notwithstanding his very imperfect description and delineation of the germinal vesicle, be considered as its first discoverer. "It is nevertheless quite certain that Wharton Jones made the discovery independently, and demonstrated the vesicle in a much more definite and certain manner, inasmuch as by tearing open the ovum he exhibited it in an isolated state."[7]

Though Bischoff made use of compression for demonstrating the germinal vesicle, he says that he succeeded with greater certainty by tearing open the ovum under the simple microscope by means of finely-pointed needles. This was the plan originally practised by myself. Here I cannot help comparing this frank and honest avowal of Bischoff with the mean and unworthy efforts made by ignorant and incapable persons in this country to impugn the trustworthiness of my observations. It was insinuated that with a simple microscope I could not have seen what I described, and that I could not have manipulated upon such a minute object as the mammiferous ovum so as to tear it open.

I remember hearing a lecture at the Royal College of Physicians by the late Dr. Robert Bentley Todd, Professor of Physiology in King's College, in which, with all the confidence of inexperience, he declared—I sitting on the front or second bench looking him in the face—that the simple microscope is an instrument of no value! A gentleman next me sarcastically whispered that "Mr. Ross, the optician, valued his simple microscopes at seven guineas." Dr. Todd, surely, had forgotten, supposing he ever knew, what Leeuwenhoek had observed with the very simple microscopes of his own manufacture; what Hewson had done with the simple microscope; what Cruikshank had done; what Dr. Robert Brown had done, and many others. As to manipulating with fine needles on so minute an object as the mammiferous ovum under a simple lens of the twentieth of an inch focus,[8] this would of course appear an impossibility to persons so unpractised as the would-be authorities in London at the time evidently were. Mr. Owen, for example, was more at home with the fossil bones of gigantic pachyderms and saurians than with such a minute structure as the ovum of the mammifera or with the mechanism of the circulation in the extreme vessels.

To return. At one side of the germinal vesicle the small spot now known as the *nucleus* was discovered and described contemporaneously by the late much-esteemed Professor Rudolph Wagner and myself. Wagner gave it the name of "germinal spot," and recognised it to be of general occurrence throughout the animal kingdom. This was a discovery of great value, and was considered as such by both Wagner and myself, though it is to be confessed that the full import of the germinal spot became evident only after Schwann's application, not long subsequently, to animal structures of Schleiden's theory of the cell-development in plants. Before the germinal vesicle itself is brought into view by tearing open the ovum, the germinal spot I observed to be frequently visible through a pore in the yelk mass at the place where the vesicle is embedded, as delineated in my original paper.

(To be concluded.)

[2] London Medical Gazette, vol. xxi.

[3] In my original paper on the "Ova of Man and the Mammifera as they exist in the Ovaries before Impregnation," I stated that on tearing open the zona pellucida in some ova, the yelk, instead of escaping in loose granules, was evacuated in one coherent globular mass. This state of the yelk was no doubt owing to a condensation of the exterior of its substance, and, notwithstanding my disclaimer, Bischoff had probably inferred that I recognised a vitellary membrane in such condensed exterior vitellary substance, thus hastily attributing to me Baer's erroneous view, whilst he credited Baer with my correct one.

[4] Ibid., vol. xxiv.

[5] See my paper in the Philosophical Transactions, part ii. for 1837, "On the First Changes in the Ova of the Mammifera in consequence of Impregnation, and on the Mode of Origin of the Chorion."

[7] Kaninchen-Eies, p. 12; and Soemmering, vol. vii., pp. 8 and 14.

[8] The setting was so bevelled away from the lens which I used that the free movement of the needles was not interfered with.

NOTES OF

CASES IN OBSTETRIC JURISPRUDENCE.

BY J. BRAXTON HICKS, M.D., F.R.S., F.R.C.P. LOND.,
CONSULTING OBSTETRIC PHYSICIAN AT GUY'S HOSPITAL.

(*Concluded from p. 246.*)

CASE 14. *Threatened Action for Damages for loss of Child necessarily destroyed by Craniotomy during Labour.*—I was consulted by a medical man who had had occasion to perform craniotomy in order to effect delivery. After a little time he had a "lawyer's letter" claiming damages—I I believe the sum was not stated—for the loss of the child. He was much surprised, and asked my advice. I told him to say that it was done to save the mother's life, and if he heard anything more of it he might summons for attempting to extort money. Nothing more was heard of the claim; but this is the first case I have ever heard of suing for the value of a child. It is clear from the remarks already made that the value would vary much by different appraisers. However, it is well always in these cases, both in the necessary induction of abortion and in the performance of craniotomy, to remember that we are liable to be called upon by the State to give one's reasons for so doing; and therefore, wherever possible, we should seek the advice and assistance of a professional neighbour.

CASE 15. *Injury to a New-born Infant.*—I was asked on the part of the Crown to examine and report, jointly with the medical gentleman called in to the case, on the state of a new-born infant found in a box in the bedroom of a servant. There was no doubt as to who was the mother, but the face of the infant was lacerated and bruised, the lower jaw on one side broken, and the structures beneath exposed and torn. The question was, Were these injuries inflicted with the intention of killing the child? Although this damage had been done, there were none of the signs of strangulation by hand or cord. There was a small quantity of air in the lungs. Had the injuries been done for the purpose of killing, they were meaningless; but supposing they were caused by frantic efforts at self-delivery, they would be explained; for the head, already expelled, forms an easy handle for force, and one can readily understand that, supposing the mother was surprised or called for, she would endeavour to bring the child away, and, snatching at the head, would hold on by the under jaw, and thus laceration would be effected, especially as she would bring the head too forward and would require to use more force by thus increasing the difficulty. This is by no means an hypothetical explanation, for it is not so very rare to see women in the throes of labour become frantic and quite wild. I remember in one case the woman made several attempts to get at the child during its birth (but was prevented), saying she would kill it if she could get at it. By whatever means the injuries were caused, it was impossible to say whether they were done before complete separation, and as the jury are always in such cases anxious to take the most lenient view, they found her guilty of "concealment of birth."

CASE 16. *Premature Birth; Fœtus found in Soil of Closet; Mother answering street door before delivery of Placenta.*—In this instance, the mistress, returning home after a short absence, was slightly detained at the door after knocking. After a few minutes the servant appeared, but looking pale; whereupon her mistress inquired the reason, and she said she was losing much. She was told to lie down, but after a little time her mistress, on going up to see her, became suspicious, and ultimately the placenta was found in the bed. On inquiry, she said she had been to the closet, and while there something came away. On looking there, a five to six months' fœtus was found, apparently dead before birth. There was a considerable quantity of blood about the bedroom, but otherwise she did not suffer from the transaction. There was nothing to show that she had procured abortion, nor that she had anticipated these events in any way; nor was there any concealment of birth, and she had told at once and correctly what had occurred. The case, therefore, did not go beyond the coroner's court.

CASE 17. *As to whether an Infant was Prematurely Born.*—A husband having returned home after some lengthened absence, his wife was delivered before the expiration of nine months; consequently a question was raised as to its paternity. The chief evidence rested on the appearance of the child, but there had been no very precise examination on this point, and it was only by general appearance that the age could be guessed. The nearest approach to skilled evidence was that of a chemist, who had seen the child in arms while passing on the staircase. He had given his opinion that it was born at full time. The counsel on the other side naturally was anxious to test the value of his opinion in such matters, and put to him several questions. I was entering the court at the moment that he was asking if he knew the length of pregnancy. The absolute blankness of expression depicted on his face while he was seeking a solution to the question has never been effaced from my memory, especially as on the repetition of the question all the women tittered, and he was obliged to give up the attempt. Consequently his opinion on the matter prevailed very little with the jury. The fact is, it is impossible to give an opinion worth anything as to the uterine age of a child after eight or even seven and a half months of pregnancy, either in respect of its size or development. I knew a case where the first three children had to be dismembered at each confinemen, each child weighing 16 lb. to 18 lb. In the following pregnancies labour was induced at seven and a half months; even then the children weighed 12 lb. Again, some children have, although at full time, only weighed from 4 lb. to 5 lb. Certainly no one could say in passing accidentally whether a child was born prematurely or not.

CASE 18.—The husband of a lady I attended came to me in anxiety, because in the morning after he had had connexion with her he had symptoms of gonorrhœa; knowing that he had run the risk of contagion a few days before, he feared lest she might contract the complaint. She was in the last month of pregnancy. He was certain that he had no symptom, so far as he could detect, on the night alluded to. However, the mother had some slight vaginitis afterwards, but nothing at all marked. The child a few days after birth had mild purulent ophthalmia, which soon passed off by suitable remedies. At the end of a year or so the wife sued for a divorce, and I was subpœnaed by her to give evidence. The question put to me by the court was as to what communication he had made to me. This I answered, after inquiring whether the communication was privileged and being informed it was not so. This is, I believe, always the answer to like questions; but I am at a loss to see the difference in principle between the communication made to a doctor of this and similar kinds and the communications which receive a caution beforehand lest the accused may criminate himself. It would be impossible in medical practice to caution our patients; and, therefore, it seems scarcely right that advantage should be taken by the law—in cases, at any rate, such as this—where the anxiety of the husband to prevent suffering for the wife has led him to apply for assistance, and thus to criminate himself. A man more careful of himself than others would leave his wife without help, in order to avoid the possibility of incriminating himself.

CASE 19. *Question as to Paternity.*—I was concerned with the late Prof. A. Swayne Taylor regarding the following point:—A lady returning to England left her husband abroad. The voyage occupied about a month. He saw her on board ship, and slept with her the night before. The next day, that of sailing, her menses, which were due, appeared. On the voyage home she formed an illicit connexion with a passenger; and on her arrival she found herself pregnant. Finally she was delivered of an apparently full-term child, 280 days after last sleeping with her husband. These facts, of which there was no denial on her part, became known to the husband, who was anxious not to avoid the duties of a father if there were reasonable grounds to suppose that the child was his own. This was the question submitted to Dr. Taylor, who asked me to join him in the answer. I saw the monthly nurse, who said that, so far as she could judge, she considered the child a full-term one. As it was admitted there was no connexion on board ship till near home—say three weeks after intercourse with her husband,—the chances of an apparently full-term child being that of the husband would be greater than that of the illicit connexion three or four weeks after, notwithstanding that she had menstruated subsequently to leaving her husband. And in this sense we framed an answer to the question. Great difficulties arise in fixing the date of conception in cases of post-conception menstruation; but generally these menstrual periods are not

so free as the ordinary ones, nor so long, though this does not always hold good. But the opposite conditions also give rise to difficulties, as was shown in a patient of mine, who, having missed three periods, thought herself pregnant. This I found by examination to be incorrect, but she continued amenorrhœal, and other symptoms of pregnancy then occurring, I found on a second examination that she was really so; she was delivered of a full-term child at the end of twelve months from the last menstrual period. The difficulty of calculating is not so very uncommon at the end of a long period of suckling, most usually owing to the presence of a blighted ovum, but occasionally from the demand on the system causing amenorrhœa, as in the following case. At the end of a long period of suckling a lady weaned her baby. Some time after she found herself to be pregnant. She calculated from the date of weaning, but she was anxious about herself when a month beyond the full term on this calculation she was still about. She had, however, to wait till 330 days were passed from the weaning. Thus she had not menstruated since the commencement of her previous pregnancy. But sometimes there is no difficulty, as in a patient of mine, who was delivered exactly 280 days after a single coitus, which occurred just before her husband left England. The above remarks apply only to the cessation of the menses as a sign of pregnancy, but approximate calculations also can be made by observing the size of the uterus; this subject, however, does not fall within the scope of the present remarks.

CASE 20.—The following case, though scarcely obstetric, shows the necessity of presenting facts clearly before a jury, and of avoiding any ambiguity where a good defence can be made. It is often a fault or a deficiency on the part of counsel that in medical cases they miss the best line of defence. In this case an excellent and very kind practitioner had prescribed for a girl with painful knee. Among other things he ordered a mild mercurial ointment known as Scott's. It was applied. But as the patient did not improve, a neighbouring practitioner was called in, who told her the ointment had done her serious harm, which so wrought upon her friends, that, through the help of a small solicitor, they brought an action in the Westminster Courts of Law. I was asked to give testimony as to the practitioner's general skill. I was not present at the first half of the trial, but was told when I came into court that the feeling of the court was going against the doctor—that quite a sensation occurred when the girl, pale and interesting, was borne in on a stretcher, a living evidence of the harm done. I asked if the defendant had had an opportunity of examining the knee. It then appeared that this idea had not struck the counsel. I strongly advised that permission be asked of the judge to allow it. He asked the plaintiff's counsel if he agreed. He answered in the affirmative. It so happened that two hospital surgeons and other practitioners were there, who assented to examine and report. The court waited till this was done, and, to the great amazement of all, they reported that there was not the slightest disease of the joint. The case immediately collapsed. It was one of ordinary "hysterical knee-joint," and the girl had got out of condition by confinement in-doors.

OBSERVATIONS ON THE

CHANGES WHICH TAKE PLACE IN THE PUPIL AFTER DEATH, AND THE ACTION OF ATROPINE AND OTHER ALKALOIDS ON THE DEAD EYE.

By J. N. MARSHALL, M.B.,

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THE following observations were made at the suggestion of Dr. James Finlayson, who, in THE LANCET of Jan. 3rd, 1885, published a case of laryngeal paralysis with unequal pupils. He noted in this case and in some others that the pupils were dilated immediately after death, and also that some time after death there was a tendency to contraction of the pupil. He also noted the action of atropine in dilating the pupil in the dead eye. I am further indebted to Dr. Finlayson for pointing out and giving me access to the literature of the subject. The observations were made on the bodies of patients dying from the specific fevers, and from various other acute and chronic diseases. The measurement of the pupil was accomplished by the aid of the scale (expressed in millimetres) enclosed in Nettleship's pocket case. I am indebted to two of the senior nurses of the institution for making many of the observations at the time of death when I could not be present myself.

State of the pupil at death.—In seventeen cases the diameter of the pupil was carefully measured at the time of death. In fifteen of these there was distinct dilatation—i.e., the pupil measured more than 5 mm. Keeping to the fifteen cases, the smallest diameter observed was 5½ mm., and the largest 8½ mm., the average being 7·2 mm. In six of these cases the dilatation took place just at the time of death, the pupils having been previously contracted; in three cases the contraction being due to the use of opium. The primary cause of death in five out of the six cases was enteric fever; in the sixth case the patient died of typhus. In other two cases the dilatation occurred a short time before death, and in one of them this was coincident with a sudden and profuse hæmorrhage from the bowels. In other three cases the pupils were observed to be dilated for some hours before death. One of these died of scarlatina maligna, another of meningitis, and the third from enteric fever. In one case only were the pupils observed to be unequal at the time of death. Twenty minutes before death both pupils measured 6½ mm.; at the time of death the right measured 7½ mm. and the left 6½ mm. The disease in this case was enteric fever, and there were no cerebral symptoms. Of the two cases in which there was no dilatation at the time of death, one died of cerebral hæmorrhage on the surface of the brain at the vertex, and the other of pyæmia, and the pupils measured 5 mm. and 3½ mm. respectively; in the latter case dilatation to the extent of 1 m. took place within an hour after death. In these seventeen cases the ages of the patients varied from five to fifty years. One of the cases in which there was no dilatation was that of a child aged twelve years. On the other hand, in three of the youngest patients the pupil in each case measured 7½ mm. During the period immediately preceding death the pupils were sometimes noticed to vary quickly in size, and to a considerable extent, without any external stimulation.

Changes in the pupil after death.—Observations were made on the bodies of thirty-five patients dying from various diseases, with the object of determining what change takes place in the diameter of the pupil after death. These in most of the cases were extended over the first three or four days after death. Out of the thirty-five cases, contraction of the pupil at some period was noted in thirty-two. In the three cases in which no change was noted the observations were not begun soon enough after death to warrant the conclusion that no change had taken place. The degree of myosis attained was found to vary greatly in different cases. It was usually least in those cases in which the pupils were not dilated at the time of death. So far as could be made out, the amount of contraction did not depend upon the age of the patient, nor upon the disease from which he suffered during life, except in so far as that may have influenced the state of the pupil at the time of death. In eleven out of fourteen cases the contraction set in within an hour after death, and the pupil usually attained its minimum diameter at the end of forty-eight hours. In twenty-six cases the average diameter of the pupil at the end of twenty-four hours was 4·6 mm., and taking the average size of the pupil at death as 7·2 mm., this gives about 2½ mm. as the amount of contraction in that time. In thirteen cases the average diameter at the end of forty-eight hours was 3·8 mm., but in two of these the diameters were as small as 2 mm. and 1⅞ m. From the comparatively small number of cases examined, and also from the wide variation which exists, these means are not of much value In one case only was it certain that further contraction occurred during the third day after death. At the end of forty-eight hours both pupils measured 2½ mm. At the end of seventy-two hours they measured 2 mm. During the fourth day there was no further change. The cause of death in this case was pyæmia. In a good many instances there was no further change in the diameter of the pupil after the first twelve hours. The case of an old man who died from pulmonary disease is noteworthy, as showing how short the state of dilatation may last after death. For at least twenty-four hours before death the pupils were distinctly contracted, varying from 3 mm. to 4 mm., the contraction not being due to the use of opium. Imme-

diately before death the pupils suddenly dilated to 6 mm., but ten minutes after death they were found contracted to 5 mm., and twenty minutes after death they measured 3½ mm., this being what they were during life. In an old woman, also dying from a cancerous tumour in the liver, the pupils were extremely contracted during life, measuring about 2 mm., and this apart from the use of opium. Immediately before the last expiration they visibly dilated to 4½ mm., but twenty minutes after death were found contracted again, the right measuring 3½ mm. and the left 4 mm. In ten out of twenty-five cases the pupils contracted unequally, and in all but two it was the right which contracted most. The difference was never more than 1½ mm. No reason could be found for this; the pupils had been equal before death. In one or two cases as the pupils contracted further they again became equal. Dilatation occurring after death was found in two out of twenty-five cases. One was a case of cerebral hæmorrhage at the vertex, in which the pupils at death measured 5 mm. No change took place in the next eight hours, but in the eight hours following that the right pupil dilated to 6½ mm. and the left to 5½ mm. Both pupils subsequently contracted and became equal. The other case was one of septicæmia, where the pupils at death measured 3½ mm. In the following half hour they both dilated to 4½ mm., and afterwards contracted. As the number of days during which the bodies were under observation was necessarily limited, I obtained permission from Dr. Cleland to examine the eyes of some of the subjects in the anatomical rooms of Glasgow University. The subjects were adults, and had been dead about three weeks. From the collapsed state of the eye accurate measurements could not be made, but it was certain that all the pupils were not extremely contracted. In three cases one was found about 4 mm., another 5 mm., and another 5½ mm. Light was excluded from the eyes by means of a black bandage applied immediately after death in five cases, and in no instance had this the effect of preventing contraction of the pupil. Some obscure allusion to the contraction of the pupil after death occurs in the article "Pupille," in the *Nouveau Dictionnaire de Médecine et Chirurgie Pratiques*, and is ascribed to the influence of light. It was on this account that the experiment was tried. The effect of the removal of the aqueous humour was tried in three cases at various intervals after death. At three hours and one hour, it was followed by no change in the size of the pupil. Twenty-five minutes after death its removal caused no immediate alteration, but within the next ten minutes dilatation to the extent of 1½ m. took place in the pupil of the eye from which it was removed. There was subsequently the usual amount of contraction in both. This was tried in view of Giersch's statements, which will be referred to afterwards. So far as could be made out from the cases observed, post-mortem myosis did not depend on or bear any relation to cadaveric rigidity. In patients dying after a long and protracted attack of enteric fever, or from phthisis, where the cadaveric rigidity was noted to be but slightly marked, contraction of the pupil took place in the same way as in other cases. Further, contraction of the pupil often set in a considerable time before rigor mortis appeared, and in a few cases the pupils continued to contract, not only when the rigidity was passing off, but after the body had become quite placid.

Effect of atropine on the dead eye.—In one case atropine was instilled one hour and twenty minutes after death. At death the right pupil measured 7½ mm. and the left 6½ mm. One hour and twenty minutes after death, both pupils at that time measuring 6½ mm., a few minims of the ordinary liquor atropiæ were dropped into the right eye. Ten minutes after the instillation the right measured 7½ mm., the left remaining as before; and in another ten minutes the right had dilated still further to 8 mm.—i.e., half a millimetre more than the dilatation occurring at death. Fifteen hours after, the right pupil had contracted to 6½ mm. and the left to 5½ mm., but the course could not be traced further. In another case atropine was instilled into the right eye three hours after death. Both pupils at death measured 7½ mm. Three hours after, the right was 4 mm. and the left 5½ mm. One hour after the instillation the right pupil measured 5 mm., mydriasis to the extent of 1 m. having taken place. The left remained at 5½ mm. In the following five hours still further dilatation took place till the right pupil measured 6½ mm. The left pupil was meanwhile contracting slowly, and had by that time reached 4½ mm. After this both pupils contracted, but remained unequal for about thirty-six hours, at the end of which time they each measured 1½ m. In a third case atropine was instilled into the left eye four hours after death, the right pupil at that time measuring 7 mm. and the left 6 mm. Dilatation to the extent of half a millimetre took place, but did not persist for more than two hours. In another three cases atropine was instilled at intervals of four, seven, and fifteen hours after death, and in no instance was this followed by mydriasis or even delayed contraction. The effect of the injection of atropine into the anterior chamber by means of a hypodermic syringe was tried in a few cases. At four and five hours after death this was followed by slight dilatation; at seven and twenty-four hours the result was negative in each instance.

Effect of eserine on the dead eye.—A solution of sulphate of eserine (two grains to one ounce) instilled into the right eye twenty minutes after death caused slight contraction within a few minutes. In another case, five hours after death it had no effect. Two hours after death neither the instillation of eserine nor its injection into the anterior chamber had any effect on the diameter of the pupil.

Pilocarpine, when administered to a dog by subcutaneous injection, is said to cause alternate myosis and mydriasis. The first is said to be its local action on the pupil, the second mydriasis, coincident with vomiting, &c., occurring after its absorption into the system.[1] I have found slight contraction of the pupil follow its internal administration to a patient suffering from acute nephritis. In the dead eye it is difficult to see how any other than a local effect can be produced. In one case it was instilled into the right eye of a body fifteen minutes after death, both pupils at that time measuring 6 mm. In the next ten minutes no effect was produced, and five minims of a saturated watery solution were then injected into the anterior chamber of the right eye. The injection was followed by immediate but slight contraction, which in a few minutes gave place to dilatation; so that ten minutes after the injection the right pupil measured 6½ mm., while the left remained at 6 mm. The inequality of the pupils persisted for the following twenty-four hours, both meanwhile contracting. In another case the same quantity was injected twenty minutes after death, both pupils at that time measuring 3½ mm. Contraction to the extent of 1½ m. took place in the pupil of the eye into which it was injected. In a third case pilocarpine was injected twenty-five minutes after death, both pupils at that time measuring 7½ mm. This was followed within a minute or two by contraction to the extent of 1 m., which persisted for the next few hours.

The effect of *ergotine* (aqueous solution, one grain in four minims) on the dead eye was tried in a few cases. Instillation within half an hour after death produced no change in the pupil. Injection into the anterior chamber of the right eye half an hour after death was followed by marked contraction of the pupil on that side. Both pupils at the time of injection measured 7½ mm. One hour after the right measured 5½ mm., while the left remained at 7½ mm. They remained unequal for about twenty-four hours, by which time the left had contracted to 5½ mm. Subsequently, both pupils contracted equally. At one hour and two hours after death the contraction following injection of ergotine was much less marked, in the latter case the pupil contracting only half a millimetre. In a fourth case three or four minims of the solution were injected into the substance of the iris of the right eye. This was followed by immediate contraction of the right pupil to the extent of 1½ m. The effect of the ergotine seemed to pass off very quickly, however; for within half an hour the pupil had begun to dilate again, and one hour after the injection it had dilated 1 m., and was equal with the left pupil, which had meanwhile contracted a little. Both pupils subsequently contracted equally.

Among English writers no reference can be found to the post-mortem changes in the pupil, with the exception of Tidy,[2] who seems to indicate that dilatation occurs *after* death, but makes no mention of contraction. Quoting Kussmaul, he explains the dilatation of the pupil by the flaccidity of the iris, which occurs at the time of death, and afterwards says: "I believe this post-mortem dilatation to be of such constant occurrence that it is impossible to judge the exact state of the pupil at death by their condition at a post-mortem conducted some days afterwards. With reference to the flaccidity of the iris at

[1] Recherches expérimentales sur le Mode d'Action physiologiques des principales Substances medicamenteuses qui agissent sur la Pupil e. (Fitzgerald.)

[2] Legal Medicine, vol. i., p. 42.

death or its capability of being changed from a circular to an oval shape by simple compression of the sides of the eyeball, there was some correspondence in the *British Medical Journal* for 1880. Joll (vol. ii., p. 507) alleges that this is a sure sign of death; while Hunt, Fay, and Moore, in subsequent letters to the *Journal*, quote cases in which this phenomenon was observed during life. In all the cases in which this experiment was tried after death I found the shape of the pupil alterable by pressure, but the ease with which this was done was greater at a late than at an early period after death, and this whether the pupils were contracted or dilated. In one case during life (a child suffering from uræmic convulsions, and at the same time under the influence of chloroform) I found the pupil, which was moderately dilated, slightly altered in shape by pressure. Irregular contraction of the pupil after death was found in only one or two cases.

Giersch[3] proposes as a test of death the removal of the aqueous humour by puncture of the anterior chamber. During life contraction of the pupil is said to occur immediately, while if the patient were dead there would be no change. As will be seen above, in the cases in which this was tried after death there was never immediate contraction, slight dilatation even occurring in one case. It did not, however, prevent the usual post-mortem contraction. Tidy and others describe the cornea as becoming hazy at a variable period after death, but usually at the end of from four to six hours, and this was what occurred in most of the cases observed. In one or two deaths from uræmic poisoning, however, the cornea remained transparent much longer than this, and in one case particularly it was observed to be quite clear at the end of twenty-four hours. This condition is probably analogous to what occurs in carbonic oxide poisoning. In this case the pupil did not respond to the action of substances at a longer time after death than usual. In the treatise by Fitzgerald, referred to above, some reference is made to the action of ergotine on the eye recently removed from the rabbit. He found that when simple instillation was employed the ergotine had no effect on the pupil, though the eye was bathed with the solution, but that if injected it caused contraction.

General conclusions.—1. In most cases the pupils are, at the time of death, dilated, the dilatation usually occurring within a short period of the fatal event. Dilatation occurring at an appreciable time after death is quite exceptional. This condition is essentially paralytic, and is independent of the state of the pupil during life, whether that is altered by drugs or by disease. 2. There is, in the great majority of cases, progressive contraction of the pupil developed after death. This varies within wide limits, both as regards its period of commencement and the degree of myosis attained. It usually begins within an hour after death, and continues for the next forty-eight hours. The contraction, which is often unequal in the two eyes, is independent of the action of light upon the eye and of the occurrence of rigor mortis. 3. The pupil is susceptible to the action of atropine after death for a period which probably varies in different subjects, but which may be as long as four hours when simple instillation is employed, and perhaps a little longer when the atropine is injected into the anterior chamber. The dilatation begins at about the same time after the instillation of the atropine as it does after instillation during life, but it differs from the dilatation occurring after the latter in that it is of less degree, and that the influence of the atropine passes off sooner and leaves the pupil to follow its usual course. 4. The instillation or injection of eserine after death produces contraction of the pupil, but the period after death during which it can act is shorter than in the case of atropine. 5. The instillation of ergotine after death has no effect on the pupil, but its injection into the iris or into the anterior chamber produces contraction of the pupil up till at least two hours after death. 6. Pilocarpine, injected into the dead eye, has a slight myotic action. 7. The removal of the aqueous humour after death does not affect the ordinary behaviour of the pupil. 8. Flaccidity of the iris during life is exceptional, but it is always present after death, and increases from the time of death onwards.

Glasgow.

[3] Vierteljahrschrift für Gerichtlichen Medicin, April, 1873; analysed in the Sydenham Society's Biennial Retrospect.

A DEATH from what is stated to have been cholera took place at Dungannon on Monday after twelve hours' illness.

FOREIGN BODY IN THE LEFT BRONCHUS, EXPELLED AFTER FIVE WEEKS.

NO AFFECTION PRODUCED IN LUNG.

BY SAMUEL WEST, M.D., F.R.C.P.,
PHYSICIAN TO THE HOSPITAL FOR DISEASES OF THE CHEST, VICTORIA PARK, ETC.

C. E——, aged eleven years, was running along the street with a small piece of brimstone in his mouth. He drew a sudden breath and felt the brimstone slip down his throat "like a piece of pudding." He felt at the time a little pain at the level of the thyroid cartilage, but did not suffer from dyspnœa. Immediately after this occurred he began to wheeze, and two hours later to cough, though he had not been troubled with either symptom before. These symptoms increased on any exertion. Fourteen days later, the cough and wheezing having become worse, he was taken by his mother to a chemist, who first of all administered a purge, and a few days later inverted him and tapped his back for some time, but without result. When examined at the hospital he was found to have considerable wheezing over the whole left side of the chest, which expanded deficiently, and into which the air did not enter freely. In himself the lad looked and felt perfectly well, and complained of nothing except a little dry cough and the wheezing. The temperature was normal.

The boy was kept under observation, without treatment, for a few days, and on the ninth day after admission, while running about the corridor of the hospital, he felt his breath become suddenly short, and began to cough violently, when the piece of brimstone came up into his mouth. All the wheezing at once disappeared, and the lad was well. The piece of brimstone was an irregular wedge, about three-quarters of an inch long and a quarter of an inch in thickness at its largest part. It was unaltered, and when spat out was quite clean and unstained. It had remained in the left bronchus for nearly five weeks, and had produced no permanent effect upon the lung.

ANEURYSM OF THE COMMON CAROTID, CURED BY REST, IODIDE OF POTASSIUM, AND COMPRESSION.

BY GEORGE D. MACKINTOSH, L.K.Q.C.P.I.

MRS. T. P——, aged thirty-five, was first seen by me on March 27th, 1883. I found her to be suffering from a pulsating tumour on the right side of the neck, opposite the upper border of the thyroid cartilage. On palpation the tumour was found to pulsate in an expansile manner—that is to say, the pulsation was equal all round as far as could be felt. On pressure the tumour could be completely emptied, and when the fingers were removed slowly refilled again by several successive pulsations; it was evidently in connexion with the common carotid artery. On auscultation a distinct bruit was audible. The patient suffered considerable pain, both at the site of the swelling and in the face, of a neuralgic character. Mr. Henry Summerhayes, who saw the case with me on this occasion, fully confirmed my diagnosis of aneurysm of the common carotid at its point of bifurcation into the internal and external carotids. We prescribed in the first instance considerable doses of iodide of potassium, with complete rest in the recumbent position and a spare diet.

On April 23rd, there being but little improvement in the symptoms, and the pain being so severe as to necessitate the frequent hypodermic injection of morphia, I determined to try partial compression by means of a firm elastic collar with a cork pad attached, so arranged as to lie completely over the tumour and to empty it of blood, whilst the circulation was not greatly interfered with; at the same time the previous treatment was persevered with. After a week's use of the collar the patient professed herself greatly better, the pain being much less severe; but there was considerable pulsation to be felt through the pad; I therefore somewhat tightened the lacing of the collar, and this had to be done again and again at intervals of a few days. At the end of three months I removed the collar completely, as there was

no longer any pulsation to be felt over the tumour, which had completely solidified, and has since given the patient no more trouble. She is now (May, 1885) going about her work as usual. Mr. Summerhayes again saw the case last summer, and was greatly surprised at the cure effected, which he acknowledged to be complete.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

SURGICAL CASES.

(Under the care of Mr. BRYANT.)

THE following cases will be found to be of interest. In the first case, one of compound depressed fracture of the skull, an attack of erysipelas developed seven days after admission, but recovery was hardly retarded. Amputation by the method introduced by Teale, now seldom employed, was found useful in the second case. The third case, where ovariotomy was performed for a cyst which had undergone rotation, is an example of a condition not very common. The interference which it caused to the circulation of the tumour had already produced changes in the structure of the cyst, and rendered its removal imperative. Rokitansky found this rotation of the cyst in eight out of fifty-eight fatal cases of ovarian disease which he examined.

CASE 1. *Compound Depressed Fracture of Frontal Bone; Cure by Natural Processes.* (Reported by Mr. Holloway.)—M. A. C——, aged sixty-four, a laundress, was admitted into Lydia ward on Dec. 26th, 1884. Patient was intervening in a quarrel, when she got knocked down, and in falling struck her head against a fender. She was stunned, but recovered sufficiently to walk to the hospital.

On admission a wound two inches long was seen over the right upper part of the frontal bone. The bone was fractured, and the posterior fragment was depressed about one-sixteenth of an inch. There were no head symptoms. Ice was applied to the head.

On Dec. 27th the temperature was normal, and the patient comfortable. On the following day a ten-grain colocynth and calomel pill was given, but had no effect. On the 29th half an ounce of castor-oil was ordered, and next day a soap enema.

Jan. 1st, 1885.—The glands at the anterior and posterior border of the sterno-mastoid are tender and swollen on the left side; throat on same side is sore. She was light-headed last night. Temperature 98·8°. Next day the temperature in the morning was 102°, and in the evening 103·6°. Ten grains of sulphate of quinine were given on the 3rd. On the 4th it was thought the patient had meningitis, but it turned out to be a slight attack of erysipelas. She was sent to another ward. On the following day there was a distinct blush along the forehead and backwards to the ear; the left eyelid was swollen. On the 6th the erysipelas had extended backwards to the vertex of the skull. The forehead was very puffy, and the eyelids swollen. Six small incisions were made in various parts of the scalp. Temperature 101·1°. Ordered twenty minims of tincture of perchloride of iron, and one drachm of glycerine in an ounce of chloroform water. On the 7th the evening temperature was 102·6°; pulse 98. On the 8th the patient was rather better; bowels open. On the 11th erysipelas was fast disappearing. There was a slight eruption on the right ala nasi. The wound of the scalp was about 1¼ in. by ¼ in. It was traversed longitudinally by an elevated row of fairly healthy granulations. By the 14th the erysipelas had quite gone, and on the 18th the wound was granulating healthily. Temperature normal. On the 21st the patient was discharged. The wound had granulated up to the surface of the scalp.

CASE 2. *Multiple Melanotic Sarcomatous Nodules of the Skin of the Foot; Amputation of Leg by Teale's Method.* (Reported by Mr. Metzgar.)—Sarah W——, aged fifty-one, was admitted into Lydia ward on July 9th, 1884. The patient has been married twice, and has had eighteen children. Nine years ago she had rheumatic fever severely. She lost the use of her right leg, and it became swollen and recovered very slowly (in about six months). A year ago a nail, projecting half an inch upwards from the sole of her boot ran into her heel. The wound bled slightly. She poulticed it for a month and then went to work again, but the wound never healed. A fortnight previously a medical man cauterised the prominent granulations. About the same time she first noticed distinct lumps in her inguinal glands and in the right popliteal space.

On admission there was found on the plantar surface of the right foot a projecting granulating surface, still showing blackness from cauterisation. There were also several small black spots beneath the skin of the sole and dorsum of the foot, somewhat like shots beneath the skin. There were no similar spots elsewhere. There was a marked blush on the anterior tibial region and dorsum of the foot. The femoral glands were slightly enlarged.

July 25th.—One of the black spots, when removed from the foot, upon section under a high power, appeared to be "a beautiful specimen of melanotic sarcoma." It was composed of "small nodular masses of large round sarcoma cells, with a good deal of intervening intercellular tissue in patches. These large cells had undergone pigmentary degeneration."

Aug. 2nd.—Under chloroform the foot was removed above the ankle by a Teale's amputation. The periosteum was peeled up from the bones for a quarter of an inch so as to overlap the cut ends, and the edge of the tibia was rounded off. As the vessels broke on torsion, they were ligatured with catgut. The wound was washed with iodine water, drained with a tube, and dressed with iodoform gauze. Evening temperature 99°.

6th.—Less discharge. At outer angle there is a darkish spot which looks blackening.

7th.—Dark spot of yesterday looks blacker, and there is a congested spot on the anterior flap where the edge of the tibia presses on it. On the following day an ounce quinine mixture was ordered. On the 9th the stump was bathed in warm iodine-and-water. On the 13th a large slough, about two inches in diameter, came away from the inner angle of the wound. On the 20th there was a granulating surface two inches and a half by two inches on outer angle, and another an inch by half an inch on inner. End of tibia could just be seen. On the 31st wound looked very well.

Sept. 4th.—Patient has diarrhœa. Ordered five minims of tincture of opium to ten minims of aromatic sulphuric acid.—8th: Wound dressed with one drachm of iodoform powder and one ounce of vaseline.—13th: Patient complains of sharp pain preventing her from sleeping.—28th: A small piece of necrosed bone came away from the tibia. The wound is almost healed.

Oct. 16th: A small piece of dead bone was removed from the tibia. It measured about two lines in length and was very irregular in shape.

Nov. 4th: Wound entirely healed.—15th: Patient went out, complaining only of a little sensation as of itching. She wore a leather pocket in which the stump hung loosely, the weight being supported by the patella. When the slough was separating the temperature rose to 100°, and was usually, with the exceptions named, about 99·2° in the evening, and normal in the morning.

CASE 3. *Large Unilocular Ovarian Cyst; Strangulation of the Cyst from Twisting of the Pedicle; Ovariotomy; Rapid Recovery.* (Reported by Mr. Seccombe).—A. R——, aged twenty-eight, was admitted into the Lydia Ward on Jan. 1st, 1884, under Mr. Bryant's care. The patient had typhoid fever when eighteen years old, and her menses only commenced after that; they have been regular and moderate since. She was confined seven weeks ago, and menstruated three or four weeks afterwards. The child is living and well. Fourteen days after confinement a red irritating rash came out on the patient's thighs and extended over the trunk and down the legs, lasting about twelve days. About a fortnight after confinement her nurse noticed that the abdomen showed signs of increasing instead of diminishing. Patient has vomited several times.

On admission the abdomen of the patient, who was rather a thin woman, was large, flabby, and greatly distended, and the cutaneous veins were very prominent. The flanks were resonant, but dulness extended over an area of about six

inches round the umbilicus. The tumour occupying the abdomen was most prominent in a point to the right of the umbilicus. A distinct wave was perceptible in every direction. The tumour was movable, and did not seem attached to the uterus. The vagina was hot and tender, and the cervix could just be touched. Menstruation came on in the evening.

Jan. 8th.—The patient has been very unwell and in a good deal of pain. Temperature 100°. Soap enema.

9th.—She was removed to a private room. Evening temperature, 99·2°. The skin feels very hot; pulse quick and feeble. The patient has been sick.

12th.—The bowels were freely opened last evening. Under chloroform, an incision seven inches long was made in the median line of the abdomen. The peritoneum was much inflamed, and the cyst wall when exposed was found to be in a sloughing condition. The adhesions were broken down with the finger. The cyst, when tapped, allowed fourteen pints of fluid, of the colour of red currant jelly, to escape. Very little of this fluid escaped into the abdominal cavity. The cyst was then drawn from the abdomen, and was found to be strangulated and twisted upon itself. The Fallopian tube and ovary were found to be engorged with blood, and part of the cyst was pinned down in the pelvis. The pedicle was ligatured with a double silk carbolised ligature, and the Fallopian tube and ovary removed. The pedicle was then allowed to drop back into the abdomen. The abdomen was sponged out with warm sponges. A piece of the anterior part of the peritoneum, about three inches square, was removed. The edges of the wound were then brought together with the cut edges of the peritoneum outside the wound, and the whole stitched up with eight silk sutures. The wound was covered with iodoform gauze. The fluid of the cyst was found to contain a large amount of blood, some pus, and some fatty globules. It was thick, glutinous, and of a deep ruby colour. At midnight the patient felt comfortable. Temperature 99·8°. A morphia suppository ordered.

13th.—In scarcely any pain. Patient is hungry; abdomen quite soft. Been sleeping a good deal at intervals; and has had no sickness. Temperature 100°.

14th.—4 P.M., passed some urine and fæces while asleep. In very little pain; sleeps fairly well; abdomen soft, and no tenderness.

15th.—Enema relieved patient of a slight motion. Has only a slight pain in her back. Takes her food with pleasure.

16th.—Passed a copious motion. Some pain in abdomen, but temperature falling.

17th and 18th.—No bad symptoms.

19th.—Stitches removed. Wound contracted to about two-and-a-half inches in length.

25th.—Patient quite comfortable.

On March 5th the wound had entirely healed; a good cicatrix, three-and-a-half inches long. She was quite comfortable, and felt no inconvenience from walking about. On the 12th she was discharged.

On the evening of the day on which the operation was performed the temperature rose to 100·1°. On the fourth day it reached 101·2°, after which it gradually fell. It became normal on the sixth day, not again rising above 99·4°.

CASE 4. *Acute Traumatic Synovitis of the Hip-joint treated by the double splint and the local application of cold, &c.* (Reported by Mr. Palmer.)—Henry B——, aged nine, was admitted into Job Ward on Oct. 30th, 1884, under Mr. Bryant's care. Ten days before admission, when making a long jump, he slipped and fell with his whole weight upon his left leg, and he says that he twisted his leg outwards. He was able to walk home. On the third day after the accident his hip had become painful and swollen, and he had to go home from school. He has kept in bed for the last eight days, as the pain had become more severe.

On admission the patient is a healthy-looking boy. His face is much flushed, his temperature 101·2°, and his pulse 120. On examination the left hip appears much swollen, and the groin is quite filled up. There is no appearance of redness about the part, but there is an increase of temperature. He lies with his limb adducted and rotated inwards. He cannot flex the thigh at all, nor move the limb to any extent. The slightest pressure over the trochanter causes severe pain. On auscultation a reduplicated diastole can be distinctly heard over the pulmonary cartilage, and on the right side also. Diet: milk, beef-tea, chicken, and two ounces of port wine. Compound rhurbarb mixture three times a day.

Nov. 1st.—Cold was applied to the thigh by means of one of Leiter's tubes, and Bryant's double splint put on. Patient has very little pain, and the swelling is somewhat less.

10th.—The swelling has not decreased since last date, and patient is not in much pain. There is a pasty look about the face, and flushing of cheeks. Temperature: A.M., 99·6°; P.M., 100·8°.

11th.—Much pain about groin, especially when touched. Temperature: A.M., 99·4°; P.M., 100·2°.

14th.—There is somewhat less swelling, and the part does not feel so hot. Leiter's cold tubes still on.

17th.—Patient says he feels quite well in his general health. Has good appetite, and can sleep well.

21st.—Swelling diminishing, but slowly. Temperature normal.

24th.—Leiter's coils discontinued.

26th.—No pain whatever about the parts, and no glandular swelling.

Dec. 4th.—Swelling still decreasing. Can bear a good deal of pressure without complaint.

31st.—No pain anywhere in leg, and he is able to move it with ease.

8th.—Thomas's splint put on.

24th.—Discharged. The hip is quite well so far as pain and swelling are concerned. Ordered to use crutches and not put his foot to the ground.

After the 14th the temperature became normal.

MANCHESTER ROYAL INFIRMARY.

CASES ILLUSTRATIVE OF RENAL SURGERY.

(Under the care of Mr. W. WHITEHEAD.)

CASE 1. *Sarcoma of Right Kidney; Removal by Abdominal Incision; Death on the Fourth day.*—J. L——, aged forty-six, was admitted on Aug. 31st, 1881. He stated that since April of the same year he had been occasionally passing blood in the urine; the attacks of hæmaturia appear to have been intermittent, the urine being at times clear, and at others very dark. During the last few months a tumour had been felt in the right flank, in the region of the right kidney. He had been losing much flesh lately.

On admission the urine was of dark-red colour, and contained blood; microscopically, it showed a number of large, round cells, with large nuclei, granular matter, but no casts. A tumour could be felt in the right side of the abdomen, which was oval, firm, and apparently a solid growth, probably springing from the kidney of that side.

On Sept. 5th the tumour was removed by an incision in the linea alba, commencing just above the umbilicus and extending downwards about four inches; from the middle of this incision another was carried at right angles outwards towards the right lumbar region. The tumour was found to grow from the right kidney. The renal vessels, which were very large, were tied with double silk ligatures, and almost the whole of the growth was removed; however, a very small portion was left, since it was in such close proximity to the inferior vena cava that one of the ligatures round the renal vein passed through a portion of the tumour. The operation was performed under the spray, and with other antiseptic precautions. A large drainage-tube was inserted into the abdominal cavity, extending to the place from which the tumour had been removed, and the edges of the wound were united with silver sutures. There was a great deal of collapse after the operation, from which the patient never completely rallied, and, developing symptoms of peritonitis, he died on Sept. 9th, four days after the operation. The tumour removed weighed twenty ounces, and measured in length six inches and in breadth four inches.

At the post-mortem there were evidences of slight general peritonitis, and in the abdominal cavity was about a pint of deeply blood-stained fluid. There was also a large, firm, dark blood clot in the position of the right kidney. Left kidney somewhat enlarged, but otherwise healthy. No secondary deposits or enlarged retro-peritoneal glands.

CASE 2. *Nephritic Abscess; Incision.*—W. B——, aged forty, was admitted to the Royal Infirmary on May 10th, 1881. He stated that he had been suffering from a fixed pain in the lower part of the back for the past two years. About a month or six weeks ago he became worse, and then noticed that his urine was very thick when passed, and at the same time a swelling was noticed in the left loin, which had gradually increased in size up to the time of admission

into hospital; also at that date he began to pass his urine per rectum.

On admission, there was found to be a large tumour in the left loin, which was acutely tender. On May 18th an incision was made into this, and forty-eight ounces of pus were let out; the finger, passed into the wound, could detect no kidney. A sound was passed into the urethra, and there was found to be a fistula between that tube at its posterior part and the rectum; a finger passed into the rectum could be passed through the fistula back into the bladder. The patient's condition considerably improved, and he ceased to lose weight. He continued for some time to pass his urine per rectum; but two months after the operation he was able to frequently pass his urine through the natural channel. On Sept. 2nd, 1881, he was sent to the convalescent hospital, the wound still discharging a small amount of pus, but the abscess cavity had very much diminished in size.

CASE 3. *Nephritic Abscess; Incision.*—B. W——, a female, aged forty-one, was admitted to the surgical side on October 31st, 1883, having previously been some time in the medical wards. She had always enjoyed good health up to May, 1883, six months before she came under surgical treatment. About that time she commenced to suffer from pain in the right loin, which varied in severity at different times. For the first few days of her illness no change was noticed in the urine, and it was not until the fourth day that pus appeared. During her stay in the medical ward she has passed on the average about thirty ounces of urine daily, and the temperature has been nearly always normal.

On admission, the patient was noted as being a fairly well nourished woman, though anæmic; she stated that she had lost a considerable amount of flesh. There was pain in the back and the right lumbar region, with painful and frequent micturition. There was a large tumour occupying the interval between the ribs and the crest of the ilium on the right side, and extending forwards as far as the median line; indistinct fluctuation was also to be noted. The urine was faintly acid, and contained a large quantity of pus and mucus.

On Nov. 1st an oblique incision was made over the tumour in the right lumbar region, the superficial incision being similar to that employed for colotomy; the kidney was exposed, and an exploring needle introduced; pus was obtained, but as the abscess was apparently deeply situated in the substance of the kidney no further incisions were made, but a drainage-tube was introduced and the wound closed. However, nine days afterwards, there being no improvement, an incision was made into the abscess, and a large quantity of pus removed. Following this there was a free discharge of pus; this material was occasionally absent from the urine, but it at times contained a large quantity. The abscess continued to discharge through the incision wound, and the urine eventually always contained a large amount of pus, and it was believed that the other kidney was probably affected. She returned home on Jan. 17th, 1884, the wound still discharging a large quantity of pus, with which the urine also was loaded.

CASE 4. *Nephritic Abscess; Incision.*—L. C——, aged twenty-three, was admitted to the Royal Infirmary on Nov. 1st, 1884. Six years previously she had had a little hæmoptysis. Twelve months ago, after her last confinement, she had incontinence of urine, and three months afterwards she began to suffer from a continuous pain in the region of the right kidney, with pain occasionally radiating thence towards the bladder; at the same time her urine became thick and muddy.

On admission she was a very pale, delicate-looking woman, and there was evidence of considerably advanced pulmonary phthisis. There was frequency of micturition, accompanied with pain. The urine was acid, sp. gr. 1030, and contained a very large amount of pus. In the right lumbar region was a distinct tumour. The temperature showed a slight evening rise, the morning temperature being also slightly above normal.

On Dec. 18th an incision, such as is employed for colotomy, was made in the right lumbar region. A large abscess was found in the kidney, and about half a pint of very fetid pus was let out.

After the operation she improved very markedly, but a small amount of urine was usually discharged by the wound in the loin. The urine contained very little pus, and she returned home on Jan. 22nd, 1885, with her urinary symptoms very much improved.

Medical Societies.

ACADEMY OF MEDICINE IN IRELAND.

Malignant Growths.—Tapeworms.

AT a meeting of the Pathological Section, held on May 15th, Dr. FOY read a paper on so-called "Malignant" Growths. He remarked that cancers are genetically identical with all other tumours. The division according to the embryonic layer is clinically useful, but not a natural classification. The name "malignant" is inapplicable to cancers, being originally used to denote diseases supposed to be due to the indwelling of a malignant spirit. Cancers are purely local in origin, and are the result of an attempted hypertrophy, in which multiplication without evolutionary specialisation results—the mass consisting of segregated animal plasma, in which the influence of the immediate environment is greater than the hereditary tendency to specialisation. The characters of cancer are explainable by the ordinary physiological life of amœbæ. Specialisation of tissue is characteristic of the higher animal and vegetable organisms. The regulating power that presides over specialisation of cell elements in the body being either in abeyance or lost, any irritation will produce a tumour, and just so far as the tendency is towards specialisation so far will it be of an embryonic type.—The PRESIDENT observed that during the last two years the etilogy and natural history of cancer had occupied the attention of the Pathological Society of London, and he thought anyone who had studied their discussions on the subject would see that not very much had been gained. The Section at that period of the session could hardly enter on the etiology of cancer.

Mr. KENDAL FRANKS showed the Upper Extremity of a Femur removed from a girl aged eleven, who had been admitted to the Adelaide Hospital, and whose right hip-joint he excised on March 24th last. The history of the case showed that the patient, whilst standing on a wall about three feet high, in the summer of 1884, had been pulled backwards by a schoolfellow, and had fallen on her back. After the fall she had been able to walk home, a distance of a mile and a half. Early in December some neighbours noticed that she walked lame. Shortly before Christmas last she fell backwards across a narrow and shallow drain and got her clothes wet, but does not seem to have hurt herself by the fall. Three or four days later she began to complain of pain and stiffness in the thigh, groin, and hip. When examined in hospital under ether, it was found that the limb was one-fourth of an inch shorter than the left, and that it measured two inches and a half more round the great trochanter. Extension and flexion could be easily accomplished, and occasionally a curious grating was detected in the joint. It was determined to open the joint freely, and, if necessary, to excise. On cutting down on the trochanter some pus welled up from beneath the periosteum, which was detached from the outer and posterior portion of the femur for about two inches in the axis of the shaft. On opening the joint a large quantity of uncoagulated dark blood was evacuated. The head of the bone was found lying loose in the cavity of the joint, hard and completely devoid of cartilage. The upper extremity of the neck was also devoid of cartilage; it was hard and rough, but in one spot was soft and gritty. The neck of the bone and upper part of the shaft showed evidences of old-standing disease. There was no pus found in the joint. The cavity of the acetabulum was roughened, very hard, and had been completely stripped of its cartilage. The author considered that the starting-point of the mischief was the original fall last summer; that an epiphysitis had been started, which gradually spread to the joint; that this had caused necrosis of the head of the bone. Whether the head had become separated previous to the second fall before Christmas, or whether the final separation had taken place as a result of the fall, was open to question, but he considered that the presence of blood in the joint favoured the latter view. Separation of the epiphysis of the upper end of the femur was not very common, and hence he thought the specimen worthy of being brought before the Pathological Section.

Mr. ABRAHAM exhibited two specimens of New Growths of the Lower Jaw, which were excised by Dr. P. C. Smyly at the Meath Hospital. One was a rapidly-growing, spindle-celled sarcoma, which first appeared six months before removal, and returned very shortly after the operation.

The neoplasm had completely invaded and softened the bone, so that an incision could be made without resistance quite through the jaw. From the microscopic appearances, and on other grounds, the theory was put forward that the sarcoma cells had their origin from the interstitial cells of the old bone. The second tumour was an example of a slow-growing, ossifying sarcoma.

A very large Tonsil, excised from a young woman by Dr. P. C. Smyly, was also exhibited by Mr. ABRAHAM. Although the patient had a somewhat strumous appearance and swollen glands in the neck, there were no symptoms whatever of lung disease; cough, nor any affection of the palate, fauces, or larynx. The other tonsil was similarly affected. The microscopic sections exhibited typical tubercle and commencing caseation. Attention was called to the scanty literature that exists in regard to tubercle in the tonsil, and it was suggested that its supposed rarity was perhaps in consequence of its not having been looked for. Considering that adenoid tissue elsewhere is a favourite site for tubercle, the latter may be expected to appear occasionally in and among the lymphoid follicles of such a gland as the tonsil.—The PRESIDENT said the microscopic sections showed the presence of tubercle in the preparations. The specimen was one of great rarity, for next to the ovaries there was no region in which tubercle was less likely to occur than the tonsils. This was hard to explain, as the tonsil was the largest mass of adenoid tissue in the body, and the relation of tubercle to adenoid tissue was known. No doubt it was possible that tubercle might be found in the tonsils if looked for. Enlargement of the tonsils was related to the strumous diathesis, and tuberculosis was also undoubtedly connected with it.

Dr. M. A. DONELLY made a communication on two different kinds of Tapeworm occurring in one subject. The patient was a waiter, middle-aged, who had never been out of the country. He had suffered from tapeworm for many years. After a large dose of male fern, the two specimens exhibited came away together. One was a tænia mediocancellata, the other a bothriocephalus latus. Dr. Donelly added that he could not understand how it happened that in these cases from twenty to forty feet of the parasite may be passed dead, while the head and upper portion remained alive and reproduced the worm.—The PRESIDENT said the Section was much indebted to Dr. Donelly for these rare specimens. The early history of the patient had an important bearing on the case. It was well known that the bothriocephalus latus came primarily from fish. If the germ were eaten by a dog or cat it did not develop, but if it got inside a human being it developed into the parasite in question. Its occurrence was very common amongst those inhabitants of Russia, Poland, and Finland who were much in the habit of eating smoked salmon; though the brandy which they generally took after it probably killed some of the germs. He had a specimen of the worm which was passed by a polar bear. It was known that that animal preferred the salmon to any other fish. The tænia mediocancellata was the beef-worm; the ordinary tapeworm came from pigs.—Dr. FOY said he lived for some years in Enniskillen, and discovered that the inhabitants of the town and districts adjoining the lake were extremely subject to worms, and also to rheumatism and cancer.—Mr. ABRAHAM observed that the bothriocephalus latus was a very rare worm in the British Islands. Most of the cases recorded of its occurrence in London were those of individuals who had lived in Russia or Switzerland. He had looked at the specimens in the museum, and found that they were all the tænia mediocancellata. One was labelled "tænia solium," but he believed that was an error.

IRISH MARINE ZOOLOGY.—The recent dredging expedition in the Atlantic and on the south-west coast of Ireland has been very successful, and although it is impossible to state the results yet, it is understood that those engaged are thoroughly satisfied with the specimens obtained. The reports of the various groups will be presented to the Royal Irish Academy, who are bearing the costs of the expedition, together with a more detailed account of the marine fauna of Bantry Bay by Professor Haddon. Mr. J. Wright, F.G.S. (Belfast), will record the Foraminifera; Mr. W. Swanston, F.G.S. (Belfast), the Mollusca; Dr. S. Malcomson (Belfast), the Ostracoda and Capepoda; Mr. H. Jacob (Dublin), the higher Crustacea; and Professor Haddon, of the Royal College of Science, Dublin, will report on most of the remaining groups.

Reviews and Notices of Books.

Overpressure in the High Schools in Denmark. By Dr. HERTEL. Translated by GODFREY SÖRENSON, with an Introduction by J. CRICHTON BROWNE, M.D., &c. London: Macmillan and Co. 1885.

THIS translation of Dr. Hertel's work on Overpressure in Schools in Denmark comes opportunely as emphasising and *confirming the facts set forth in Dr. Crichton Browne's* masterly report on the same subject with regard to the evil effects of overpressure in the Board schools of England. Dr. Hertel's investigations, however, differ in one respect from those of Dr. Crichton Browne, in that the inquiry was confined to the better-class boys' and girls' schools in Copenhagen, whereas in England attention has chiefly been drawn as yet to the condition of health of those attending our lower-class schools as represented by the School Board system. This difference, so far as English readers are concerned, greatly adds to the value of Dr. Hertel's work, for, possessing as we do Dr. Crichton Browne's valuable report on the condition of health as it exists in our elementary schools, we now have a basis on which to found an opinion as to the extent of the ill effects of overpressure in our middle-class and public schools. The main evil of the present method of education lies, with the higher schools, in the fevered condition of life induced by the system of competitive examination; with the Board schools, in the rigid application of a standard of education far above the capacity of the majority of the underfed and anæmic children on whom it is forced. In both cases the dangers resulting from such overpressure is greatly aggravated by the want of proper medical supervision. In our higher schools such a thing as a systematic weekly or fortnightly inspection by a medical man is almost unknown, and it is not till a break down occurs that the overstrain is detected; whilst the unfortunate pupil of the Board school can get no exemption from attendance, when ailing, without a medical certificate—a matter of difficulty with the poor, who cannot afford to pay for one, whilst an application through a hospital consumes more time than the parents can spare from their daily toil.

The evil effects of the present system of overpressure can be partially estimated by the result obtained by a Government commission, composed of public officials, teachers, and physicians, into the state of Danish school-children of *all grades*, published subsequently to Dr. Hertel's report. This commission collected exact information as to the health state of 28,225 children—viz., 16,889 boys, and 11,225 girls (*sic*); by the way, the Danish Commissioners seem themselves to be examples of educational failure, since there is a slight mistake in the addition of the figures here given. Of the boys, 29 per cent., and of the girls 41 per cent., were found to be in a sickly state of health. The disorders most prevalent were anæmia, scrofula, and headache. The failure of eyesight among the young in Denmark is something astounding. In the classical department of the largest schools in Copenhagen, 45·5 per cent. of the scholars in the upper class were found short-sighted. A system which leads to such disastrous results as regards bodily health is no less pernicious in checking mental evolution. At no epoch of life is the necessity for maintaining the balance between construction and destruction of nervous energy greater than in the period immediately preceding adolescence; and it is just at this time that keen competition is most severely felt by subjecting, as Dr. Ross well remarks, "the latest evolved portions of the nervous system to a strain so great that only those possessing the best balanced and strongest nervous systems can escape unscathed." To find a parallel to the present state of affairs one must go back to the thirteenth century,

a period in which, as the learned author of the "Opus Majus" declares, "never was there a greater appearance of wisdom, nor such a pressure of work in every branch of learning in every quarter, than during the last forty years. For teachers," he says, "were dispersed everywhere, in every county, in every city, and in every borough, especially amongst the two studious orders; yet, nevertheless, never was there such a degree of ignorance, so much error." Such was the testimony of Roger Bacon *just before the commencement of those three centuries* aptly termed the "dark ages," in which learning was utterly eclipsed, and yet he had pointed out the more excellent way. "Duo enim sunt modi cognoscendi, scilicet per argumentum et experimentum." Never were these words more applicable than now, when the reasoning powers are utterly ignored, and the gift of a good memory puts a competitor far in advance of his more intellectual competitors. Cramming in this age is only another phase of the scholasticism of the thirteenth century. Will it be followed by an age as dark?

Elementary Text-book of Entomology. By N. F. KIRBY, Assistant in the Zoological Department, South Kensington Museum. With 87 plates. London: W. Swan Sonnenschein and Co. 1885. Pp. 240.

THIS work contains a short and, in proportion to their value, fairly well balanced account of the several orders of insects. Mr. Kirby returns to the old arrangement of seven orders, including the Strepsiptera in *Coleoptera;* the Euplexoptera and Dictyoptera in *Orthoptera;* Trichoptera, Thysanoura, Collembola, Mallophaga, and Thysanoptera in *Neuroptera;* the Aphaniptera in *Diptera;* the *Hymenoptera, Lepidoptera,* and the rest in *Hemioptera.* The descriptions of the several families are short and clear, and embrace notices of many of those found in other countries. The pursuit of entomology seems to be sufficiently fascinating to lead its votaries to incur considerable personal risk. Thus Mr. Kirby states that the high-flying species of Morpho, which inhabit the mountainous districts of Western America, are much more easily captured than those that frequent the plains, though their capture is often attended with difficulty and danger. Mr. Kirby has heard of one naturalist in Bogota who fell over a precipice, breaking his arm, and then found he had to make a three days' journey on horseback before he could meet with a doctor to set it. Another naturalist who was collecting in Bolivia, and who was no other than the well-known Mr. Buckley, found that the Morpho godartii, a beautiful light-blue species, previously almost unknown to naturalists, frequented an inaccessible ledge in the mountains; and he was obliged to have himself lowered by ropes over the precipice before he could obtain it. In speaking of the ant tribe, Mr. Kirby of course quotes McCook and Bell's observations. The latter has given so remarkable an account of the action of corrosive sublimate on a species of ant in Nicaragua as to deserve repetition here. As soon, he says, as one of the ants touches the white powder, it commences to run about wildly and to attack any other ant it meets. In a couple of hours round balls of ants will be found all biting each other, and numerous individuals will be found bitten completely in two, whilst others have lost their antennæ or some of their legs. News of the commotion is carried to the formicarium, and large fellows measuring three-quarters of an inch in length, that only come out of the nest during a migration or an attack on the nest or one of the working columns, are seen stalking down with a determined air, as if they would soon put matters right. As soon, however, as they have touched the sublimate, all their stateliness leaves them; they rush about, their legs are seized hold of by some of the smaller ants already affected by the poison, and they themselves begin to bite, and in a short time become the centre of fresh balls of rabid ants.

There are several points in which we venture to suggest to Mr. Kirby improvements might be made that would much enhance the value of his work. In the first place, the introductory chapter, in which an account is given of the structure of insects, might be considerably enlarged with advantage, and a few woodcuts illustrating the structure of the heart, nervous system, and organs of respiration and generation might be introduced. This would surely not occupy much space, and would render the treatise much more complete. In the next place, though the figures have references to the text, there are no references in the text to the numerous figures of insects on the plates. Then no pains have been taken to show by a line or cross the actual length of the insect from which the figure was copied, and of the extent to which the wings will expand when these are present; and, finally, there is no index, a defect that is only very imperfectly supplied by the table of contents. The work is prettily got up, and the illustrations are good representations of the insects they are intended to indicate.

North France, from the English Channel to the Loire, and from the Bay of Biscay to the Rhine, inclusive of Paris. With 19 Maps and 20 Plans. Pp. 427.—*South France, or France beyond the Loire, including Corsica and part of Italy and Spain, with their Wintering Stations on the Mediterranean, the Summer Resorts in the Pyrenees and Western Alps and on the Bay of Biscay.* With 38 Maps and 23 Plans. Fourth Edition. Pp. 639.—By C. B. BLACK. Edinburgh: Adam and Charles Black.

THE names of Messrs. Black are a sufficient guarantee of the great value of these guide-books; and the fact that the "Guide to South France" has now reached its fourth edition is significant of its thorough appreciation by the travelling public. As guide-books they are very complete, while the information afforded in them is calculated to satisfy the demands of the most exacting inquirer. The maps are clear and elaborate, while the plans of the different cities and towns cannot fail to be of great service. By the aid of these volumes a route could easily be marked out in advance, and the traveller might prepare himself to view with a more than ordinary intelligent interest the various scenes and objects in his way; and last, but not least, he would be in a position to form a good idea of the probable demands upon his resources.

HOUSING OF THE WORKING CLASSES BILL.

THE Association of Public Sanitary Inspectors has addressed to the House of Commons a petition on this subject, expressing views which have our cordial sympathy. The petition points out that much of the failure to maintain in habitable condition tenemented houses is due to the fact that the sanitary inspectors are often unskilled and are too much dependent upon those whose interests are opposed to sanitary progress. They therefore recommend that a certificate of proficiency should be required of every inspector who has not held his office for three years; that he should not be appointed or removed from office without the consent of the Local Government Board; and that he should hold the same position as regards pensions as the officers of Poor-law authorities. It is not probable that the status of officers of local authorities will be dealt with until after the election of a new Parliament, and then only as a part of a large scheme for the better government of the metropolis and of the counties. But the very fact that an Association of Sanitary Inspectors has thus recognised the important character of the work which devolves upon its members is in itself full of promise for the future, and will doubtless have an influence in drawing into the service men who are better fitted, both as regards knowledge and independence of character, for the difficult duties which they have to perform.

THE LANCET.

LONDON: SATURDAY, AUGUST 15, 1885.

IT is confessedly a figure of speech to describe the compilations of returns made to and by the Commissioners in Lunacy year by year as Reports on Lunacy. They do not in any true sense deserve that description. The schedule of statistical and other statements presented to the Lord Chancellor, and by him laid before Parliament, is really a report of work done and stock-taking from the "office" point of view, such as the managing directors of a public company submit for the gratification of their shareholders—the people who put their hands in their pockets and find the money. The Commissioners in Lunacy tell the Lord Chancellor every year what they have done, and he brings the return under the notice of the money-finding branch of the Legislature—the House of Commons. It is not, perhaps, surprising that a report bearing this character should abound in expressions such as "after much trouble and inquiry." The Commissioners are justified in making the most of their task, but it is a little ludicrous to find that "much trouble and inquiry" should be entailed by simply reclassing some of the data supposed to be already in possession of the Commissioners, and which certainly ought to be duly pigeon-holed at Whitehall, and must have been accurately known there if the information relating to lunatics, which the Board professes to obtain and digest as the bases of its successive reports, has any actual existence. As it is, "the office" would seem to have been thrown into confusion and put to "much trouble and inquiry" to comply with the new conditions established by the change in the laws as regards the maintenance of criminal lunatics, which now renders a separate enumeration of that class of the insane desirable. Until now the criminals in asylums, hospitals, and licensed houses have been distinguished as "pauper" and "private patients" according to their location. The Commissioners have had the toil of rearranging these lunatics, retrospectively, for the last twenty-seven years; and having, "after much trouble and inquiry," accomplished the feat, they may claim and are entitled to the gratitude of Parliament and the public. For the rest, it appears that the usual visits have been duly paid; and in addition to the routine visitation of asylum hospitals and licensed houses, 264 workhouses have been inspected. In the interest of the Commissioners as well as that of the insane population, and for the satisfaction of the public, we would suggest that in future "Reports" the dates of, and time occupied in, all official visits made during the year, with the names of the places visited, should be given. It would not occasion "much trouble and inquiry" to make this return, and there would be a full and sufficient answer to the practical question repeatedly asked in quarters where no doubt should exist whether or not it is physically possible that the Commissioners in Lunacy should be able to perform the task imposed on them within the time allotted for its accomplishment. Such an enumeration would also throw great light on the question whether the asylums are actually under the supervision the law assigns for them. We say nothing about their inmates. For ourselves we must confess, looking to the increase in the clerical and statistical work of the Board, it is difficult to believe that the direct personal visitation of the places in which real or alleged lunatics are detained can be efficiently performed, unless, indeed, the vast array of figures embodied in the thirty-eight tables now given in the Report are simply compilations of returns furnished by the asylum superintendents; in which last case it would be equally difficult to understand how, with the large and increasing demand on their time, these gentlemen can possibly discharge their most important duties to the insane under their care. We want to get at the bottom of this practical and highly important question. Are the Commissioners in Lunacy engrossed with figures, or are the superintendents of asylums, hospitals, and licensed houses worried out of their wits to furnish materials for the tables which the Commissioners claim credit for compiling?

On January 1st, 1885, there were 79,704 "lunatics, idiots, and persons of unsound mind" returned to Whitehall, showing an increase of 1176 on the total number returned on January 1st, 1884. From the analysis of the subsidiary data relating to these totals the following conclusion is drawn:—"These figures tend to support the conclusion stated in our last report, in which the following paragraph occurs: 'The large annual addition to the number of insane persons under care has produced in some quarters an impression that insanity itself is much on the increase.' On examination, however, of the figures now under consideration, it will be found that the increase is almost entirely due to accumulation of chronic cases of the pauper class, so that the community at large would not appear more liable than formerly to be attacked with insanity." This is satisfactory, but we cannot forget that the Commissioners' own board-room was one of the "quarters" in which the impression prevailed that insanity itself was "much on the increase," until the fallacy of the calculation whereupon that impression was founded was exposed simultaneously in the pages of the *Nineteenth Century* and in the columns of THE LANCET some six years ago, prior to which the Commissioners *did* believe in the increase of insanity, and *did not* recognise the effects of "accumulation." Indeed, it was not until about 1881 that this factor in the result was taken into consideration. The alleged increase was clearly due to the process of "sweeping" patients into asylums, where they lived long, if not happy, lives, reappearing year after year in the "total number" returned on successive 1sts of January. This "sweeping" is still in progress, the number of "out-door pauper lunatics" being only 8·28 per cent. of the whole number of paupers classed as insane, not more than 5896 in all.

This year's Report contains the usual returns, with five new tables. Table 3, with the deductions drawn from it, shows that the Commissioners have even not yet arrived at the distinction between cases certified or returned and newly occurring cases; so that they continue to regard the number of the insane falling under their cognizance as representing the state of lunacy in the population. By-and-by they will probably discover the truth about this matter, as they have at length perceived the truth about the "increase of insanity." According to table 4, the "ratio

(per 10,000) of admissions to population" in 1869—when the Commissioners believed insanity to be on the increase—was only 4·71; whereas, for the last eleven years since 1874 the ratio has been over 5. In 1884 it was 5·27, though by certain considerations applicable to some recent years it may be reduced to 4·95 per 10,000. With what reason, then, have the Commissioners changed their view if the conversion has not been due to the facts about figures which we were instrumental in bringing under their notice?

THE main points of the controversy in regard to hospital nursing by nurses of an exclusive sect are now pretty well before our readers and the public generally. No mistake could be greater than to refuse to see this question in all its bearings, or to deny that it arises very naturally in the Hospital Sunday Fund, which is contributed by all churches and creeds. The religious community of London, which has shown itself magnanimous enough to sink all differences in this supreme effort to help the sick, may be trusted to display serenity in this discussion, and to conduct it to an issue best alike for the credit of our common Christianity and for the poor who fill our hospitals. As our own judgment is already frankly declared on the side of those who disapprove of sectarianism and exclusiveness, especially in University College Hospital, we are mainly concerned with the arguments of those who uphold the existing system at that hospital. They are chiefly these: That in interfering with this question the Hospital Sunday Fund is acting *ultra vires*, and that if its interference is not resented it will interfere in other questions; that the present system at University College Hospital is as near perfection as possible, the very essence of it being the religious agreement of the nurses; and that there has been no serious complaint of proselytism on the part of the nurses.

On one point there have been apparently divergent statements. According to some authorities probationers as well as nurses are required to be members of the Church of England; according to others they are not. The explanation of this divergence seems to be in the distinction between probationers and those who merely wish to learn nursing. By probationers are meant persons wishing for nursing service in the hospital, and they are required to be members of the Church of England. There is no such restriction in the case of those who wish merely to learn nursing. Their religious opinions are not inquired into. They are called trainers, as distinguished from probationers.

To return to the arguments. Let us take first the admitted excellence of the nurses. It will not be maintained that this argument can be pressed too far. Good nursing is no longer confined to University College Hospital. It is no longer the exclusive property of any creed. On the contrary, it has been found that where persons of different creeds work together there is a healthy rivalry amongst them. The other great hospitals of London are well nursed. Some of them—notably Guy's and King's,—after trial, have abandoned the nursing by an exclusive sisterhood. One great hospital in New York—the Belle Vue—took a sister from University College Hospital to start and organise the nursing there, *but without restriction of creed*, and it is found to answer admirably. The advocates of an exclusive system will have difficulty in dealing with such facts as these, especially in the case of University College. And when the extreme nature of the creed is considered, and the impossibility of concealing or suppressing it, the difficulty of defending the system becomes much greater still. Even without intending it or being conscious of it, the sisters are apt to exert influence and pressure, and it is absurd to say that the authorities of the hospital have no sense of responsibility in placing the sick under such nurses. Suppose a slight, a very slight, extension of such a system—the appointment of exclusively Roman Catholic nurses on the supposition that they were the best nurses: could that be justified, or could it be maintained that the sick had no interest in the matter? The number of even the members of the Church of England who would maintain that good nursing and a high morality in hospitals are not to be had apart from a sisterhood is, we trust, limited. A doctrine so inconsistent with experience, and we may say with modesty, cannot be that of the majority of church-people. Be this as it may, it remains a fact that the experience of London, of the best provincial hospitals, like that of Leeds, and of the Belle Vue, gives ample illustration of good nursing and good *morale*, at reasonable cost, on the principal of taking nurses of all creeds and churches.

As to the right of the Hospital Sunday Fund to raise the question. The contributors to the Fund have raised it. They are religious men, and this is a religious question They are not in the least likely to interfere in other matters of mere administration. But this is exactly the kind of question that touches them, and upon which their feelings should be consulted. We trust that they will know where to stop. It would be absurd to endanger the Hospital Sunday Fund on such a question, which is not that of the Church of England *versus* other bodies, but an extreme section of the Church of England against other sections of it and against other churches. We look to churchmen and nonconformists alike to see that the support of hospitals is above all questions of this sort. But we look to the authorities of hospitals, as wise men, to maintain their own authority in hospitals, and to preserve their own freedom to employ nurses of all creeds so long as they are good ones.

ALKALOIDS as agents in the causation of symptoms of disease have grown into great prominence during the past few years. The interest that attaches to "cadaveric alkaloids" is both pharmacological and forensic. Perhaps no one has done more for the advancement of our knowledge of ptomaines than Professor BRIEGER, who has recently published "Weitere Untersuchungen über Ptomaine."[1] As far back as 1866 DUPRÉ and BENCE JONES noted the presence of alkaloid-like substances in all the organs, tissues, and fluids of human and animal bodies. Owing to the fluorescent appearance of the solutions of this alkaloid in weak sulphuric acid the name of "quinoidin" was given to it. Nevertheless, DUPRÉ and JONES did not succeed in obtaining ponderable quantities of the pure substance. In 1869 SONNENSCHEIN and ZÜLZER obtained from a maceration of muscle an alkaloid having the property of dilating the pupils of rabbits and dogs. When injected into the jugular vein of rabbits, it increased the number of beats of the heart, and in two animals completely stopped the peristaltic action of the

[1] Berlin, A. Hirschwald, 1885.

intestines. RÖRSCH and FASSBENDER found in 1871 in the liver, spleen, and kidneys, by the Otto-Stass method, a body having alkaloidal properties. It was a tasteless, uncrystallisable substance, and gave, with phospho-molybolic acid, a precipitate, which by warming and the addition of ammonia assumed an intensely blue colour. In the same year SCHWANERT extracted from the putrefying intestines, liver, and spleen of a child that died suddenly a peculiar-smelling fluid body that dissolved in ether. On the supposition that this was an alkaloid formed during putrefaction, SCHWANERT analysed the completely putrefied abdominal organs of a male corpse, and obtained a golden oil that smelt of propylamine, had a somewhat bitter taste, and gradually evaporated. The hydrochlorate of this body gave various reactions like those of alkaloids, but its toxicology was not investigated. L. LIEBERMANN extracted from a putrefying stomach a coniine-like substance, which was taken up by ether from either alkaline or acid solutions. This substance had no poisonous properties. Traces of arsenic were found in the same stomach. In a trial for murder by poisoning, held at Brunswick in 1874, the expert in chemistry discovered, besides arsenic, a coniine-like base that OTTO regarded as a ptomaine. It did not give the characteristics of nicotin, though resembling it in some respects. It was deadly poisonous, and killed a frog and a pigeon very rapidly. A similar kind of alkaloid was detected by BROUARDEL and BOUTMY in the corpse of a woman who had died with symptoms of cholera, and who had partaken of a stuffed goose with ten other individuals. The base was also detected in the remains of the unwholesome goose. The substance was volatile, smelt strongly of mice's urine, and gave several reactions like those of coniine, though it differed in remaining colourless with muriatic acid, and could not be oxidised into butyric acid. It proved poisonous to frogs. In the cadaver resulting from prussic acid, and also in another due to charcoal fumes, the same authors discovered an alkaloid having a likeness to veratrin. Somewhat similar substances were also found in a body dead from arsenic, in one that had lain in water eighteen months, and in another that had succumbed from asphyxia. WOLKENHAAR, again, extracted from the intestines of a woman who died from the excessive use of alcohol an alkaloid-like body having many features in common with nicotin; it was not toxic in its action. MORRIGGIA and BATTISTINI stated that dead bodies yielded much larger quantities of poison eighty days after burial in warm summer weather than when they were investigated in a shorter time after interment. These statements were made as the result of physiological experiments on frogs and rabbits. Extracts of the putrid tissues were made with pure or acidulated water, ether, ethyl-alcohol, or amyl-alcohol, and injected into the animals mentioned. Falling off in the number of heart-beats, loss of motility and sensation, and stoppage of the heart in systole were the phenomena noted.

The name of SELMI stands out most prominently in this field of work. It was he, if we mistake not, who first coined the word "ptomaine," which indicated the cadaveric origin of the alkaloids. It is now known that bodies undistinguishable from those discovered in the cadaver occur under many other circumstances. We may refer our readers to the article by Dr. WOLFENDEN, published in THE LANCET of 1883, vol. ii., p. 852. The investigations of GUARESCHI and MOSSO may also be mentioned (THE LANCET, vol. i., p. 827, 1883). BRIEGER lays much stress on the following propositions: That in the different stages of decomposition in the human body different basic products are formed; that many ptomaines disappear, their place being taken by others; and that certain bases, though present in spare quantities at the beginning of decomposition, gradually acquire a greater prominence as other basic substances disappear. A certain analogy exists between the above-mentioned changes and those met with in the putrefaction of albumen. NENCKI has shown that for the formation of indol a certain temperature is necessary; whilst the production of phenol, according to BAUMANN and BRIEGER, is independent of temperature. ODERMATT has proved for indol what BRIEGER has for phenol—that it disappears completely to make place for other aromatic products. In the course of putrefaction, cholin, which is probably derived from lecithin, is perhaps the first alkaloidal substance to make its appearance. On the third day what BRIEGER has called "neuridin" ($C_5H_{14}N_2$) can be found. Neuridin forms with picric acid a picrate which crystallises in feather-like masses of needles, which are almost insoluble in cold water and very difficult of solution in hot water. Neuridin is always found in company with cholin, but the latter gradually diminishes in quantity, whilst the former increases day by day. The fact that in slow putrefaction of human organs no strongly poisonous ptomaines can be shown to exist during the first few days deserves attention. About the time of the disappearance of cholin may be reckoned as the period when strong toxic products are developed. It is not known whether trimethylamin results from the decomposition of cholin or neuridin, but both these bodies contain its elements. BRIEGER refers to the appearance of a ptomaine on the seventh day which has hitherto been unknown. One of his observations showed that this new base was present even on the third day, though in very minute traces. With platinum salts the new base formed dark red masses which were composed of needles mixed up with spangles and spicules. The purified crystals were of a somewhat brighter colour, and were found by Dr. HIRSCHWALD to be about two millimetres in length, and to belong to the rhombic system of crystals. The crystals proved with polarised light to be doubly refracting. The base also forms a beautiful double salt with gold. This new diamin ($C_5H_{16}N_2$) is termed "cadaverin," and boils at a temperature of 115° to 120° C., unpleasant its odour is; reminding one of coniine. A third diamin has also been differentiated, having the composition of a butylendiamin ($C_4H_{12}N_2$), but its reactions prove it to be a secondary diamin. The absurd name of "putrescin" is given to this substance, which may be detected on the fourth day of natural putrefaction, but is not present in large quantities until a week later. A fourth diamin called "saprin" has also been isolated from the products of decomposition of human organs. Neuridin, cadaverin, putrescin, and saprin are physiologically almost harmless; cholin in large quantities produces physiological effects like those of muscarin; whilst trimethylamin must also be given in large quantities in order to cause toxic effects. BRIEGER has, however, found

two powerfully poisonous ptomaines in the cadaver. These poisons existed in large quantities on the fourteenth and twenty-first days of decomposition. One of these bodies is named "mydalein"; it exercises marked effects on the various functions of the body, increasing the nasal and lacrymal secretions, dilating the pupil, stopping the heart and breathing, and causing paralysis and death. After large doses the heart is found to stop in diastole. Severe diarrhœa and vomiting were observed in a cat as the result of the injection of a minute dose of the poison. BRIEGER has also investigated the nature of the products resulting from the action of bacilli in various media. He has separated highly poisonous bases from cultivations of the KOCH-EBERTH bacillus of typhoid fever. Intense salivation, diarrhœa, and paralysis were some of the toxic effects produced by these poisons.

THE history of the outbreak of enteric fever in the West London District School, which we publish in another column, will be read with much interest. We learn from Mr. DELAMOTTE that the school is situated on a low-lying porous soil, which has for years received the sewage from 800 or 900 persons, the sewage being pumped on to land some 300 or 400 yards from a surface-well supplying the school with water. The well, we are told, is but twenty feet deep, and is protected to within one foot of its bottom by an iron tube, which serves the purpose of preventing the surface washings in its immediate vicinity from entering the well. But the well has daily supplied 25,000 gallons of water, and it has doubtless drained an area which receives the sewage from the school. Hence it can be no matter for surprise that the well-water has become polluted, and that one-third of the inmates have been stricken with enteric fever. There is, indeed, but one other cause which might possibly account for so sudden and severe an outbreak. We refer to the milk-supply, which we learn by inquiry at the school is derived from cows belonging to the institution, and providing milk which is wholly consumed by the inmates. The milk supply, it is stated, can, however, be eliminated from suspicion. A number of men occupied during the day upon the premises do not reside there, but live at a distance, receiving their milk from another source, and drinking none of that supplied to the school; yet they have none the less suffered from disease. As early as June 18th the precaution of boiling the water was taken; on July 18th a supply from another source was brought in water-carts to the institution; and on July 23rd water was laid on to the building from the neighbouring waterworks. The cessation of fresh attacks does not correspond very closely with these dates, for it was not until after July 24th that their number was diminished in a marked degree; but much of this apparent maintenance of the disease after boiling was resorted to may be due to the fact that the invasion of enteric fever is in childhood especially insidious, and the dates of attack under these circumstances cannot be very accurately stated. We see, therefore, no reason on this ground for doubting that the well-water is responsible for the outbreak.

But there are other circumstances which demand explanation. For several years before the present epidemic the school inmates had suffered from enteric fever. In 1881 three children were attacked with this disease, in 1882 two children, and in 1883 as many as twenty-two cases occurred. It is difficult to believe that a polluted water-supply could have been responsible for these cases, for the same water was consumed by all the inmates of the institution; and yet the disease was until the present year limited almost wholly, if not altogether, to the inhabitants of the boys' wing, which is situated a considerable distance from that portion of the building allotted to the girls and infants. In 1884 but five cases occurred, and the smaller number in that year is attributed by Mr. DELAMOTTE to the fact that the sewage was pumped to a part of the ground a further distance from the area frequented by the children than formerly. It is likely enough that this explanation is correct; but if so, a strong suspicion is created that the provision of a pure water-supply will not entirely remove from the school the occasional prevalence of enteric fever. There appear, indeed, to be two factors engaged in the causation of the disease, and the removal of the one will not prevent the operation of the other.

The whole of the building, we are told, derived its water-supply from one large tank, into which the water from the well was pumped. There was therefore no difference in the water consumed by the boys, girls, and infants, yet these were attacked in proportions which differ too greatly to be merely an accident of figures. Thus, while of the boys but 22·7 per cent. were attacked, as many as 56·4 per cent. of the girls have suffered; the infants being midway between the two, and having a proportion of attacks equal to 39·7 of their total number. This difference undoubtedly has some meaning which is not at once obvious. The acceptance of the theory that the well-water had become contaminated with sewage gives rise to the apprehension that the soil beneath the school building, which is in close proximity to the well, may also be saturated with the same material; and the story is told by the officials, that on the opening of the floor of the dining-room on two occasions a most offensive odour was detected, and was followed by attacks of enteric fever among children who occupied that part of the hall in which the openings were made.

There is therefore considerable reason for regarding the soil beneath the institution and in its neighbourhood as saturated with excremental matter, which must now to some extent be specifically polluted, and it is obvious that this point deserves careful consideration if the school is to be free from the occasional appearance of enteric fever among its inmates. It is gratifying to know that the whole subject is now being investigated by an officer of the Local Government Board, especially as the outbreak appears to be one which is of special interest from an etiological point of view.

WE are glad to gather from our latest information from the United States that the prospects of the International Medical Congress meeting have improved. It would be strange indeed if such a project in such a country could fail of a successful issue. The organisation of the profession there may be somewhat different from what it is in older countries, and there may be ideas of professional freedom which exceed ours. There may even be questions of a personal character involved in the arrangements to be made; but that the arrangements will be great, and conceived in a magnanimous spirit, and worthy of the profession of a

great country may, we trust, be taken as already secured. One guarantee of this hopeful view being realised is to be found in the nomination of Dr. FLINT as President of the Conference. Dr. FLINT is so well known amongst us, not only by his works but by his genial and dignified presence, that the English profession will need no other proof of the oneness of the profession in both countries, both in its spirit and its practice, than the selection by the American Medical Association of this distinguished physician for the chair of the Congress. It will be the same in other European countries. Dr. FLINT has not hesitated to take long voyages in promotion of the international co-operation of the profession. He was as active at Copenhagen as in London, and we doubt not that the European response to the American invitation will be wide and hearty. The little differences which have arisen in America are such as the near approach of the Conference will dispel or resolve. Some of them are differences which will keep, and which can be postponed till after the Congress. The Congress itself will swallow many of them up, and give an overwhelming exhibition of the unity of the profession, such as will best at once answer and convert those who would break it up into sections and cliques, or liberate any of its members from those great traditions which have been the distinction of the profession from the time of HIPPOCRATES downwards.

There are, indeed, powerful attractions to draw members of the profession over to Washington in 1887. The road is not an untrodden one. Many of our brethren have already crossed the water, and they bring back but one report of the greatness of the land, and the hospitality and kindness of its people, and especially of our medical brethren. Besides this, we need not remind our readers of the fact that medical art and science are in a most active state across the Atlantic. The Americans set us an excellent example year after year of disregarding the sea and its sickness in search of knowledge, and to acquire the last hints of Europe in art or science. They come so freely that we are apt to think they are only learners, and not teachers; but no mistake could be greater. They are profoundly influencing both surgery and medicine, and our own foremost leaders would be the first to admit their indebtedness to American physicians and surgeons in respect of details, and of boldness, in the improvement of instruments, in the great operations of surgery, in the addition of new medicines, and of enterprise in the whole field of pathology and therapeutics.

Annotations.

"Ne quid nimis."

PUBLIC HEALTH (METROPOLIS) BILL.

FEW circumstances tended more to increase efficient sanitary administration throughout the country generally than the consolidation under the Public Health Act 1875 of all the sanitary laws then in existence. But the metropolis has always had exceptional legislation, and this legislation is spread over a number of Acts, and is even contained in isolated clauses in general Acts, the result being that there are but few persons who have a detailed and accurate knowledge of the sanitary law as applicable to London. The Government have therefore done well to introduce the Public Health (Metropolis) Bill, which is really an Act to consolidate, with certain amendments, the Acts relating to nuisances, infectious diseases, and other allied matters in so far as the metropolis is concerned. The principal matters dealt with relate to public and private nuisances, offensive trades, inspection and condemnation of unsound foods, water-supplies, isolation of the infectious sick, disinfection, &c.; and as regards some of these matters the sanitary authorities are invested with new powers. Concerning isolation arrangements in the metropolis, it is probable that the plan, which was adopted in 1883 and renewed in 1884, of vesting this matter essentially in the hands of the Metropolitan Asylums Board, and this quite irrespective of the question of pauperism, will become permanent, for it is re-enacted in the proposed Bill, and it becomes increasingly evident that the system of multiple authorities dealing with precisely the same question is not likely to ensure success. The duties of the vestries in this matter, however, are not done away with; but, as things now stand, it is to be expected that they will, apart from any great emergency, look to the Asylums Board to do the work. In the face of any great epidemic, the proposed Bill will re-enact the various powers which now vest in the Local Government Board as to issuing orders relating to the speedy burial of the dead, house-to-house visitations, disinfection, &c., and the provision of medical aid for the sick. The Bill is not intended to become law this session. It will, however, now be printed and circulated, so that it may be studied by those concerned in the health of the metropolis, with a view to such suggestions as may tend to make the consolidation effective.

INFECTIOUS HOSPITALS FOR SMALL TOWNS AND VILLAGES.

THE Local Government Board have recently issued two diagrams relating to the provision of infectious hospital accommodation, and these, taken together with the re-issue of the official report on the same subject, go to show the increasing interest which is now given to the important means of sanitary defence which adequate isolation accommodation affords to a community. The official report laid it down as a principle that the permanent accommodation at each hospital centre should include provision for the immediate isolation of two diseases in both sexes; and, since this has always been carried out by providing a separate pavilion for each disease, the arrangement in question necessarily involved the erection of two ward blocks in addition to the requisite administrative buildings. In the case of small towns and sparsely populated districts, where some four to ten beds alone were needed as a permanent provision, this plan seemed altogether prohibitory, and hence we are glad to see that the difficulty has been largely overcome in one of the diagrams in question, which indicates the best form for a hospital building in the case of small towns, villages, or public institutions. One ward building alone is provided, and it consists of four rooms, arranged in two groups. Each set of rooms consists of a ward for two beds and of a nurse's room; and whereas the two doors of the one set open into a covered verandah at the front of the building, those of the other set open similarly at the back, and thus no communication between the inmates of the one set with those of the other is possible, unless they make the tour of the building, a thing that can easily be prevented by means of proper administrative control. One diagram shows a small administrative cottage for a care-taker, and it is suggested that the nurses should sleep in an upper floor of this building; but in case no such arrangement should be practicable, a second storey containing a nurse's sleeping-room is shown in the centre of the ward-block, and in order to secure that infected ward air should not have access to

the nurse's sleeping apartment, the room in question is approached by a staircase opening on to one of the verandahs referred to. The diagram also suggests a convenient arrangement for an outbuilding containing a wash-house, earth-closet, disinfecting room, &c., and it also indicates that all these buildings must be kept at least forty feet from the close fence by which the site is enclosed. This point is one which should be borne in mind by sanitary authorities, for we believe we are correct in stating that for many years past the Local Government Board have held this amount of open zone between the hospital buildings and the boundary to be imperative in all cases in which a loan is granted for the purposes of hospital construction. The other diagram embodies very much the same principles as those indicated in the one just described; the arrangement, however, includes accommodation for ten patients in two groups of five. The five patients in each group are divided into two ward-rooms—one having three, and the other two, beds; each set of two rooms being separated by a nurse's room, which is on both sides fitted with a fixed window giving a view into the two rooms. Here, again, all the rooms open separately into the outer air under one or other of two verandahs, much on the same principle as that which is to be found in the isolation pavilion at the London Fever Hospital. This diagram shows clearly the amount of cubic floor space and of wall space which is desirable for each bed; and it also indicates the best arrangements for the ward windows. The building shown in this diagram is either adapted to the needs of a population of some 8000 or 10,000 persons; or else it will be found to be of the utmost value as one of the pavilions of a larger institutions, for it admits of the isolation of at least two diseases in both sexes, and separate rooms can be set apart either for doubtful cases of fever, for persons who are ready to pay for private accommodation, or for any special purposes. The buildings shown in the two diagrams will supply a want that has been felt in connexion with the provision of hospitals for infectious diseases, and they will provide a very large amount of efficiency in the most economical way practicable.

THE SURGEONCY OF THE CITY POLICE.

NOTWITHSTANDING that there has been no official notification of the fact, some of our readers at least must be already aware that the Surgeoncy of the City Police was rendered vacant a few weeks ago by the resignation of Mr. Borlase Childs. The office, to which a substantial remuneration is attached, is one which may be expected to attract the notice of such practitioners as find they can devote a portion of their time to the discharge of its duties. It is to be hoped that the public spirit which inspired the electors of forty-one years ago, when Mr. Childs was elected, avowedly on the principle that he was the best available candidate and to the exclusion of the nominee of his predecessor, will continue to direct the choice of their representatives in our generation. That the electing body, as a whole, are animated by this intention we have no reason to doubt. That they can only by following out such an intention in practice and securing a perfectly open election do justice either to the police or to the medical profession we are perfectly certain. Rumours are current, nevertheless, that the effect of certain recent proceedings on the part of the Common Council has been to diminish very considerably the number of those candidates who, having had an early knowledge of the resignation of the retiring police surgeon, have already been able to place their claims before the Police Committee. The practical outcome of a regulation dealing with the age of applicants, whatever its motive, has been to clear the field of four out of six competitors. Of the two who are still eligible, one frequently acted as deputy for the late holder of the surgeoncy, and is said to be barely within the limit of age which has excluded from all chance of election most of his opponents. There is nothing illegal in this arrangement. There is no evidence, it may be, to show that one applicant is much to be preferred to another. Still we cannot but regret that at the time chosen for making this change of rule a number of gentlemen had offered themselves for election, so that their distinctive qualifications could be known to the committee, and that its effects should have proved so clearly advantageous to a small but not uninfluential section. The result in matters of this kind is usually decided among the earlier applicants. Any who may come forward after publication of the vacancy are heavily handicapped in the race. It may not yet, however, be too late for some of the younger practitioners to offer themselves, or even for the Council to reconsider a rule which is, so far as we know, unique. In any case, we may be allowed to express an earnest hope that the tenure of the important office in question will be decided, as it worthily may, by the fair vote of each elector for the best man, whether he does or does not possess private influential support.

MICROBE OF PALUDISM.

Two years ago M. Laveran recorded the results of an investigation on the micro-organisms of intermittent fever (THE LANCET, vol. i., 1883, p. 1103). His observations were very different from those of Klebs and Tommasi-Crudelli, who described a bacillus malariæ which they found in the soil of the Campagna. Recently MM. Marchiafava and Celli have succeeded in finding filaments identical with those described by M. Laveran in the blood of patients affected with malarial fever. The Italian observers also state that they have caused quotidian attacks of intermittent fever by an injection of these elements into the veins of human beings. The spleen became enlarged and the micro-organisms were discovered in the blood of those who had been inoculated. It appears, according to M. Debove that Gerhardt of Wurzburg had recorded similar observations anterior to the above-named observers. In reply to a question from M. Dujardin-Beaumetz, M. Laveran asserted that the administration of sulphate of quinine was followed by the disappearance of the animated filaments from the blood of the patients; only the pigmented granules persisted. M. Guyot urged that under these circumstances it was strange that quinine should fail to cure some cases of malarial fever. In answer to this criticism, M. Laveran said that sulphate of quinine only acted on the most active pathogenic elements, the mobile filaments.

RELAXATION FOR MEDICAL PRACTITIONERS.

IT ought not to be necessary to speak to medical men of the need for periodic rest and change, which they more than many feel, and they alone can fully understand. Their work, we may say, is unceasing; it ties them usually to one place, it abounds in worry, and it is imperfectly relieved by intervals of broken rest. That it possesses certain partially compensating advantages we do not deny. Thus, the free movement in the open air which it allows is preferable to the physical stagnation of some sedentary callings. The interest of its subject, the study and care of the human frame, though mingled not uncommonly with sadness and perhaps with acute sorrow, possesses a certain refreshing and encouraging influence. Then monetary uncertainties do not bulk so largely in it as in some other callings, and the worry of interrupted sleep may within limits be dulled by the indifference begotten of habit and by the effect of counteracting arrangements. But, every allowance being made, it is manifest that continuous residence in one spot is incompatible with that which chiefly consti-

tutes refreshment—variety. However we may phrase it, the same idea presents itself. It has descended to us as a habit of former times, once the privilege of a few, but extended and accentuated in our days of strenuous effort, as if in answer to a physiological instinct. We talk of a holiday, vacation, recess, of leisure, of rest and change, diversion, recreation; but all our terms are threaded on one thought: it is that a change is needed, and one as much, we may say, of mind and person as of place. Vacation from the old work will, by relief of tension, encourage repair; and the employment of time in lighter and congenial pursuits will often prove the best means of carrying out this process. What these pursuits will be, and to what extent they should be followed, the type, age, and habits of an individual can usually best determine. The fittest sphere of recreation, moreover, is a subject of no little consequence. There is, fortunately, free communication with almost any spot which may be selected. We have before spoken approvingly of the life on shipboard as being well suited to many. We would again recommend this enjoyable kind of holiday to our medical brethren in search of relaxation. Be our choice, however, what it may, it is clear that for most of us staying at home *incognito* will not do. If we wish for leisure, we must go afield in order to enjoy it. Especially does this rule apply to one situated among the numerous calls of general practice. Such a one can only escape from the pressure of engagements by leaving his neighbourhood altogether.

PARASITES AND TUMOURS.

THE part played by "irritation" in evoking tumour formation is well illustrated by Dr. Belleli, of Alexandria, in his record of a case where a fibro-adenoma of the rectum was apparently produced by the presence of the ova of bilharzia in the submucous tissue (*Progrès Médical*, 1885, No. 30) This, it seems, is not an infrequent result of the parasitic disease. The adult bilharzia, lodging in the portal and vesical veins, deposits its ova in the small vessels of the walls of the intestine and bladder, where they become arrested, and are often set free into the intestinal canal or the bladder by rupture of the obstructed vessels. Many of the ova remain lodged in the walls of these viscera, and they have been found throughout the whole extent of the intestine associated with polypoid growths. These tumours are especially frequent in the rectum, and give rise to dysenteric symptoms. The case in question was that of a boy twelve years of age, who had suffered from hæmaturia and dysentery for nearly two years. The urine contained many ova of bilharzia, and on examination of the bowels a tumour of the size of a small apple was found projecting on the left side. It had a broad base, but was successfully removed by the écraseur. The histological characters of the growth were those of the ordinary adenomatous polypus of the rectum, but in the fibrillar tissue between the epithelial tubes were seen groups of the ova of the parasite. There can be no doubt, Dr. Belleli thinks, that it was owing to the entrance of these still living ova, some of which contained living embryos, that the tissues had been irritated, and as through the rich venous supply of the rectum facilities are afforded for a constant ingress of the parasites, the continued growth of the tumour may be explained. He goes further, and endeavours to show that the reason why the tumour formation in this and similar cases is homologous and regular is because the irritation is limited by the non-development of the embryos. If, on the other hand, the ova had undergone their full transformation, it is probable that the irritation of the tissues would have been more extensive, and would have prevented the regular arrangement of the newly-formed histological elements. In other words, a continued and increasing source of irritation would have resulted in the formation of an atypical epithelial growth—a true cancer. Such an hypothesis opens the way to a wider conception of the origin of tumours, and it is hinted that we may ultimately find a solution for this problem in the action of minuter forms of parasitic life upon the tissues of the body. Truly, there seems no limit to the territory of the microbe, which will soon claim to govern the whole range of morbid processes, at least in fancy; but we cannot help feeling that Professor Virchow is right when he says that the future will see a reaction in favour of the re-establishment of cell-life and cell-processes as the real foundation of diseased action.

THE METROPOLITAN BOARD OF WORKS.

AT a meeting of the Metropolitan Board of Works on the 7th inst., it was decided, in view of the possible advent of cholera to London, to allow the Works and General Purposes Committee to take any measures which may be considered desirable during the vacation to deodorise the Board's main sewers and discharges at the outfalls. Mr. W. R. Selway, the mover of the resolution, stated that he had been making inquiries of the officers who had charge of this matter—the engineer and consulting chemist,—and found that there were being poured into the sewers of the metropolis, and were being used at the off outfalls for the purpose of deodorising and disinfecting, between 30,000 and 40,000 tons of manganate of soda and from 10,000 to 12,000 tons of sulphuric acid every day. The Board was spending in money between £3000 and £4000 per week in deodorisation. He was glad to say that the result of the work they had been carrying on was that the condition of the Thames, generally speaking, might be said to be good. There were here and there small patches of discoloured water; but if those patches were offensive, it was rather to the eye than to the sense of smell or to health.

THE SUPPRESSION OF JUVENILE VICE IN BRUSSELS.

THE origin of the present Criminal Law Amendment Bill dates back some three or four years, when a great outcry was raised in consequence of the importation of young English girls into Belgium. The Belgian authorities, however, without waiting for the publication of startling "revelations," and even before the old regulations affecting public women could be altered, determined to manage matters better. Orders were given by the municipality of Brussels to exclude all minors from the houses of toleration. According to the official report of the burgomaster, the problem has been solved simply by vigorously applying existing laws. When the ordinary means of persuasion usually employed fail to reclaim a young girl, the police inform the people with whom she lodges that they will be prosecuted in accordance with Article 379 of the penal code. Some of the persons who were interested in lodging young girls did not at first believe in the possibility of such proceedings, but they were at once summoned, and relatively severe sentences were inflicted. The result is that now all owners of houses frequented by women of loose character are careful not to admit minors. These latter soon find themselves without any dwelling-place, and are then arrested for vagrancy. When once these facts were clearly understood, the evil was nipped in the bud so far as Brussels is concerned. Unfortunately, other municipalities were not so strict, and by changing their quarters many of the young girls were able to resume their former practices. Further, the result of the strict application of the Contagious Diseases Act in Brussels shows that the average number of venereal cases in the army has been reduced from 8·25 to 5·32 per

cent. But at Antwerp the proportion is 8·23 per cent.; at Ghent, 10·88 per cent.; and at Liège, 13·24 per cent. In England, without the application of any law affecting those who let lodgings to young girls, these latter were driven off the streets by the Contagious Diseases Act when it was enforced. At Portsmouth, Plymouth, Windsor, &c., it will be found that the great majority of inhabitants are anxious to see the law re-applied; and one of the reasons given for this desire is the shocking and unchecked development of juvenile prostitution which ensued after the suspension of the Act.

MICROBES IN BOVINE PNEUMONIA.

SOME researches have been made by Professor Lustig of Hanover with a view to the discovery of the pathogenic microbe of contagious pneumonia of bovine animals (*Centralblatt für die Med. Wissensch.*, No. 12). Lustig has inoculated suitable cultivating media with fragments of lungs in a state of recent inflammation, and also with lymph taken from the interlobular connective tissue of the inflammatory foci. He has succeeded in isolating in pure culture four varieties of microbes. One is a bacillus that liquefies gelatine and forms at the confines of the liquefied area pulverulent masses of a whitish-grey colour. When all the gelatine is liquefied the bottom of the vessel is occupied by a powdery deposit of the same nature. The bacilli are short and thick rods. The liquefied gelatine varies in tint dependent upon the proportion in which the other varieties of microbes are present. The second microbe is a micrococcus which does not liquefy gelatine, and forms at the surface a deposit something like the white of an egg in appearance; the gelatine is gradually absorbed as this cultivation proceeds. The third is also a micrococcus, very like the preceding, only that it forms golden-coloured clusters. The fourth is micrococcal in form, and appears as coloured heaps of a yellowish orange tint, having a waxy look on the surface of the gelatine. It does not liquefy the medium, and grows better on potatoes. Inoculations made on a heifer gave mostly negative results.

NATIONAL VETERINARY ASSOCIATION.

AT a meeting held at the Royal College of Veterinary Surgeons in London, 27th October, 1882, Mr. G. A. Banham, F.R.C.V.S., convener, it was resolved to found a National Veterinary Association. The objects were defined to be, "to provide means for holding meetings of the profession for discussing professional topics, and otherwise advancing veterinary science." In compliance with a further resolution "to hold the general meetings of the Association in various parts of the country from time to time," the first meeting was held in London in 1883, the second in Manchester last year, and the third has just been concluded in Birmingham. Mr. George Fleming, Mr. Thomas Greaves, and Mr. Harry Olver have been the successive presidents. The local Birmingham committee having applied, through its chairman, Mr. J. M. Parker, and its secretary, Mr. John Malcolm, to the committee of the Medical Institute, this building was freely given up for the purposes of the meeting, which assembled Tuesday, 4th inst., and continued the next day. The following was the order of proceedings: On the first day, at 11 A.M., the president and officers of the Association were elected, and it was resolved to hold the next meeting in Edinburgh in 1886, under the presidency of Professor Walley. At 12 noon the President of the Birmingham Medical Institute, Mr. Sampson Gamgee, F.R.S.E., gave a short address of welcome to the members; the President of the Association, Harry Olver, Esq., F.R.C.V.S., then delivered his inaugural address. At 2 P.M. Mr. Rutherford opened a discussion on a paper by Mr. McGillivray on Epizootic Pleuro-pneumonia. On the second day, at 10.30 A.M., Professor Axe opened a discussion on a paper by Gen. Sir F. Fitzwygram, M.P., F.R.C.V.I., on the Origin of Disease. A very animated discussion afterwards took place on the desirability of limiting to Fellows the right of electing the Council of the Royal College of Veterinary Surgeons. A very strong feeling was expressed against the justice and legality of such a limitation, and the meeting voted for its abolition by twenty-six to six. At the close of the first day's meeting a sumptuous dinner was given at the Grand Hotel, and amongst the guests were Mr. T. H. Bartleet, J.P., Mr. Vose Solomon, Dr. Saundby, Mr. Gamgee, Dr. Alfred Hill, Mr. Lloyd Owen, and others. In the upper rooms of the Medical Institute were arranged a museum of drugs, instruments, &c., used in veterinary practice. Amongst the exhibitors were Messrs. Arnold, Burgess, Hewlett, and Southalls. Nothing could exceed the cordiality of the meeting, which was largely and influentially attended.

EFFECTS OF DESTRUCTION OF THE OLFACTORY LOBES.

THE dependence of function on the concerted action of structures is an important truism; it was not, however, universally recognised till it was insisted on by Herbert Spencer and Lewes. The olfactory lobes are not the organs of smell. They are incapable unless in collocation with the rest of the olfactory apparatus. All the parts are necessary to perfect action. Dr. Lustig has made some interesting observations on the changes that ensue in rabbits as the result of the removal of the olfactory lobes. He destroyed one or both lobes by means of a sharp spoon or the hot iron. Nine rabbits survived the operation for some time. Forty-five to sixty days after the operation the rabbits were killed by bleeding. Examination of the nasal mucous membrane showed that the olfactory region presented a remarkable degeneration of the olfactory cells and epithelium in those animals in which both lobes had been removed. The olfactory cells had almost entirely lost their central appendages and the small prolongations of their peripheral appendices. The epithelial cells had undergone fatty degeneration. The intermediate cells also bore witness of similar alterations. Some of the cells were altogether destroyed.

HEALTH OF RANGOON.

THE report of the Deputy Commissioner on the working of the Rangoon municipality for the year 1884-5 shows the death-rate for Rangoon town to have been higher than in any of the preceding five years, and to have amounted to 40·50 per 1000 of the population. The increase in the mortality was the result of an epidemic of small-pox, and the greater prevalence of fevers and bowel complaints. The epidemic of small-pox began in November, 1883, reached its height in February, 1884, and ceased in April. It caused 884 deaths out of 1468 cases reported, in a population of about 125,000. Cholera did not prevail to a great extent, but seems to have been of a very fatal character, for of 82 cases reported 70 died. The sanitary condition of Rangoon seems to be carefully attended to, and to be steadily improving. An abundant supply of pure water has been introduced, and is getting into general use, though there are still difficulties experienced with regard to the tanks and closing of polluted wells. Arrangements are now under the consideration of the municipality for introducing a system of drainage—an improvement which seems much needed; public latrines fitted with Field's automatic flushing tanks have been erected, and measures are being taken to provide accommodation for the treatment of infectious diseases. During the prevalence of small-pox, vaccination and revaccination were actively carried on, a supply of lymph being

obtained, from the calf, at a depôt established for the purpose; 8543 persons were vaccinated and 3124 revaccinated. The health officer states that "vaccination was the only measure of any value that could be taken to arrest the progress of the scourge; isolation of one-twentieth of the cases was among natives impossible." The health officer, Dr. Pedley, appears to have spared no pains to promote the improvement of the sanitary condition of the municipality, and to his exertions undoubtedly is due much of the progress which has been made in that respect. We would suggest that in future reports more information should be given as to the amount of population in the town and the whole station respectively, as it is manifest that some error has crept into the table at the top of page 24, and no means are afforded of correcting it.

THE GERMAN ASSOCIATION OF NATURALISTS AND PHYSICIANS.

THE fifty-eighth meeting of this Association, which last year met at Magdeburg, will this year meet at Strasburg. All inquiries in respect to lodgings may be made to Herrn Quästor Schmidt, Universitäts gebande. Notices of communications and abstracts of papers should be sent to Herrn J. Stilling. The meeting will commence on Thursday, Sept. 17th, and terminate with excursions on Sept. 23rd. The sections are: (1) Mathematics and Astronomy; (2) Physics; (3) Chemistry; (4) Pharmaceutics; (5) Mineralogy and Geology; (6) Geography; (7) Botany; (8) Zoology; (9) Anatomy and Anthropology; (10) Physiology; (11) Pathological Anatomy and General Pathology; (12) Pharmacology; (13) Medicine; (14) Surgery; (15) Gynæcology; (16) Pædiatrics; (17) Ophthalmology; (18) Psychology and Neurology; (19) Otology; (20) Laryngology; (21) Hygiene; (22) Military Surgery; (23) Veterinary Medicine; (24) Farm Economy.

SUCCESSFUL OPERATION IN TUBAL PREGNANCY.

DR. F. WESTERMARK describes in a Swedish medical journal a case of tubal pregnancy upon which he operated successfully. The age of the patient was twenty-three. She began to menstruate at twelve, and always suffered a good deal at the periods. Sometimes she ceased for several months at a time, and for this amenorrhœa she attended the Serafimerlasarettets Polyclinic in 1882. A cure was effected and she became quite regular. In September, 1883, she was married; she menstruated regularly till December, 1884, when she ceased. In February, 1885, the breasts began to swell and she believed herself to be pregnant. On the 11th of March there was slight hæmorrhage, which recurred three times in a week. On the 19th she had some pain and hæmorrhage; thinking she was about to abort, she sent for a midwife. On the 25th Dr. Westermark saw her and found the cervix closed, the uterus enlarged and retroverted; to the left was an elastic tumour about the size of a small fist. The patient being unable to micturate, a catheter was passed and the uterus replaced. She continued in a satisfactory condition for three days, when she was seized with diarrhœa, vomiting and pain. The next day she was nearly collapsed; she was again catheterised and the uterus replaced. Shortly afterwards a complete cast of the uterus came away. Her condition appearing serious, and being in poor circumstances, she was admitted into the Maria Hospital on April 8th. It was noticed that there was no tenderness on palpation. Above Poupart's ligament a tumour about three or four centimetres in diameter was felt. The uterus was enlarged, movable, anteflexed, and displaced to the right, the os being closed. The tumour could be felt to be distinct from the uterus, and was about the size of a goose's egg; it was soft, elastic, smooth, and did not fluctuate. A placental souffle was heard over the tumour. On the opposite side no corresponding sound could be detected. The lungs were healthy; there was an anæmic cardiac murmur; the urine contained some albumen, but no casts; the temperature was normal, and the pulse from 80 to 90. The next day there was some hæmorrhage, and on the 15th a recurrence of pain. On April 19th the abdomen was opened under antiseptic precautions. In the peritoneal cavity a quantity of bloody serum and some firm clots were found; the cavity was carefully sponged out. The viscera and serous membrane appeared much injected. The right ovary and Fallopian tube were healthy; the uterus enlarged and soft. To the left lay a tumour the size of a goose's egg, in appearance very like an incarcerated hernia; immediately below, and to the outer side, lay the left ovary. The tumour was soft and very elastic; there were adhesions externally. When pricked with a needle some bloody serum exuded. It was then ligatured and removed, and the abdomen sponged out with boracic solution and closed with deep and superficial sutures, the wound being dressed with corrosive sublimate gauze. The patient did well. The tumour was egg-shaped, having at one end the cut Fallopian tube, and at the other the fimbriated extremity. No trace of umbilical cord or embryo was discovered in the cavity of the tumour or in that of the abdomen, but traces of chorion and placental tissue were found in the tumour.

UNCHASTITY AMONG SCHOOLBOYS.

THE Archbishops of Canterbury and York have spoken through the Church on the gross immoralities of the day. The former lays especial emphasis on the necessity for young men "to keep themselves pure in feeling and language as well as in act." Such a remark should have weight coming from one now at the head of the Church, whose past life and best energies have been given to the intellectual and moral development of the sons of the upper-middle and upper classes of this country, first as tutor in the head master's house at Rugby, and subsequently for fifteen years as head master of Wellington College. This justifies his speaking from a long and exceptional experience of the immoral disposition which springs from impurity of feeling and language in youth, leading insensibly, but certainly, to immorality in act. A "conspiracy of silence" has fallen upon us, says the Archbishop of York, and it is against this conspiracy of silence and secrecy in all matters that should be public among those who have the charge and training of the boys at our public schools that we have more than once remonstrated. Root out an evil from the educated classes, and the example will diffuse itself through all grades of society to the lowest stratum. In the lower spheres impurity is forced upon the people by the conditions of their existence; but among the upper classes it is sought, and follows the economic rules of demand and supply. Strike at the demand and the supply will cease. It is quite true, as the Archbishop says, that immorality is not confined to one class, but it is nevertheless equally true that it prevails most in the extremes of society, the highest and the lowest. In its most voluptuous and revolting form, it implies the possession of wealth to command it. The offspring of the wealthier classes often inherit a disposition to unchastity; hence the greater need of safeguards to their boys at our great public schools, or the acquired disposition may become a fixed part of their nature. Often when a school is at its highest repute a lessened vigilance permits a lewdness of language to creep in, which leads to licentiousness of feeling and unchastity in act. It is to the purity of youth that the Archbishop looks for morality in manhood. "Just as the twig is bent the tree's inclined." The public schools to which we might refer are probably as well known to

the Archbishop of Canterbury as to ourselves. If the evil is to be rectified, something more must be done than the mere expulsion of a few detected instances of unchastity, which is the usual, but we think harsh and useless, remedy resorted to by schoolmasters. The conditions which have fostered these will engender others. It is pre-eminently within the power of the Archbishop of Canterbury to strike effectually at the root of this evil. Words of exhortation would tell for good both on masters and pupils, and extend his Grace's past high example as a schoolmaster altogether beyond its past and present limits. It is the especial gift of the Archbishop of Canterbury to influence boys and young men for good, and at no time has it been more needed than now. "Where the sun shines brightest the shadow is deepest." In one of his published sermons[1] to the boys he says: "Masters, parents, prefects,—on all of us it rests to pray earnestly and use our intellects and hearts to find the remedy for an evil." The poison and the antidote are side by side.

CORROSIVE SUBLIMATE IN OPHTHALMIC PRACTICE.

DR. BELOV, writing in a Russian ophthalmic journal, gives his experience of corrosive sublimate as a treatment for inflammation of the conjunctiva. The cases in which he used it numbered 65, and were made up as follows: 26 of catarrhal conjunctivitis, 19 of the phlyctenulous variety, 2 of the croupous, 2 of the blennorrhagic, and 16 of the granular. The conclusions to which he was led were:—1. Under the use of an extremely week solution of corrosive sublimate as a spray, inflammatory secretion quickly diminishes and in a short time disappears. In acute cases the inflammatory infiltration quickly decreases, and in chronic cases there is also a diminution of the infiltration, which, though less marked than in acute cases, is more rapid than when nitrate of silver is used. 2. Phlyctenæ, which quickly disappear when calomel is used, are also rapidly cured by corrosive sublimate. 3. Trachoma complicated with acute or chronic inflammation, in addition to the cure of the latter, shows a diminution in the number of the granulations. 4. In all acute inflammations where nitrate of silver is contra-indicated, instead of employing cold and leeches, a weak solution of corrosive sublimate can be used, not only in the form of drops and collyrium, but in extreme cases as a wash applied with a syringe. 5. In chronic inflammations and in the second stage of blennorrhœa a combination of nitrate of silver and corrosive sublimate in solution gives better results than the silver alone. 6. Good results may be anticipated from the use of a weak solution of corrosive sublimate in the form of spray as a prophylactic against ophthalmia neonatorum. The author makes the applications from two to eight times a day, continuing them for half a minute to a minute at a time, according to the quantity and nature of the secretion. The atomiser is always held close to the eye in order that the spray may be blown in with sufficient force to remove the secretion quickly and thoroughly. In all cases the lower eyelid is first turned out and then the upper, each being sprayed separately; in this way the eye is kept open so that the whole surface of the conjunctiva is exposed to the action of the atomised fluid. In cases of phlyctenæ the spray is used with the lower lid slightly drawn out, the upper lid being at the same time held back. The author particularly recommends the sublimate treatment in cases where nitrate of silver is unsatisfactory—e.g., chronic conjunctival catarrh and conjunctivitis in scorbutic subjects, and where complicated with inflammation of the cornea. He considers the use in ophthalmic practice of a solution of the strength of 1 to 20,000 or 1 to 10,000 quite safe.

[1] Macmillan and Co.

DIARRHŒA MORTALITY IN ENGLISH AND CONTINENTAL CITIES.

THE last weekly return of the Registrar-General shows a slight further increase in the death-rate from diarrhœa in the twenty-eight large English towns, notwithstanding the decline in the temperature. The annual death-rate from this cause in these towns, which had steadily increased in the preceding four weeks from 1·0 to 3·2 per 1000, further rose to 3·7 in the week ending the 8th inst; the rate during the latter week was equal to 3·9 in London (showing a decline from the rate in the previous week), and ranged upwards in the twenty-seven provincial towns to 4·6 in Sunderland, 5·5 in Leeds, 7·2 in Salford, 10·0 in Leicester, and 11·4 in Preston. High as are some of these diarrhœa rates in English towns, they appear low when compared with the rates from the same cause in many continental and foreign cities. The above-mentioned weekly return affords the means for calculating the recent death-rate from diarrhœa in several of the large foreign cities, from which it appears that the rate was equal to 3·4 in Paris and 3·7 in Brussels, or slightly below the rate in London. In St. Petersburg the rate in the week ending July 25th was 8·8, and in the preceding week it was 4·7 in Stockholm. A marked excess is shown in most of the German and Austrian cities. In Berlin, during the week ending July 18th, the rate from diarrhœal diseases alone was 21·0 per 1000; while in the following week it was 18·0 in Breslau, 5·8 in Hamburg, and 5·4 in Dresden. In the week ending the 1st inst. it was 4·5 in Vienna and 12·8 in Munich. In Venice the rate was 6·4 in the week ending July 18th. In the American cities furnishing returns remarkably high rates from this cause are also reported. In the week ending July 11th the rate was 17·8 in New York and 20·1 in Brooklyn; and in the following week it was 8·5 in Philadelphia and 9·2 in Baltimore. As summer diarrhœa is mainly fatal among infants, the value of these figures, for comparative purposes is to some extent discounted by the varying proportions of young children in the population of the different cities. The variations in the rates, however, are far too wide to be even largely due to this cause. That the causes of this diarrhœal mortality are rather sanitary than meteorological may fairly be concluded from the fact that so northerly a city as St. Petersburg is suffering more severely therefrom than Vienna, Venice, and other towns in comparatively southern climes.

MALINGERING.

MALINGERING is a subject which may well occupy the attention of all medical men holding public appointments. Though a very old form of imposition, and in some varieties become so trite as to be nearly impracticable, it still maintains itself like a hundred other practices of dishonesty, acquiring new ruses as the old become familiar. Unfortunately for truth, the revelation of tricks in which functional diseases are simulated is rendered more difficult by the fact that a diseased condition may sometimes be actually induced and maintained without greatly endangering the prospect of recovery. Some such varieties of illness, while they last, have almost the aspect of collapse. Acute vomiting is an example. The convict Williams, who lately evaded a ten years' term of imprisonment by a pretence of ill-health, appears to have convinced almost all about him that he was *in extremis*. Perhaps his illness, though self-induced, was real. Equal desperation in resource has been shown by ordinary prison-breakers in their efforts to escape. Nay, the suffering and annoyance voluntarily endured by bedridden female impostors, rather than forego the interest and charity which they thus invoke, are equally remarkable. The physician and surgeon have frequent cause to guard against another half-conscious form of deception. This

consists in the exaggeration of slight injuries sustained by railway accident or otherwise, which, though trifling in themselves, may, if magnified by the dim light of reported symptoms alone, become a source of unjust profit to their possessors. Careful independent observation, with the use of other than subjective tests of disease, will commonly, however, guide the medical attendant on malingerers of any kind to a true diagnosis. Some cases nevertheless require for their detection a long term of rather sceptical supervision. The convict we have mentiond may have been one of these. Why, in his dubious position, he was not allowed to receive such medical treatment as may have seemed necessary within the prison we are not informed.

CHOLERA ARRANGEMENTS AND THE ASYLUMS BOARD.

WITH reference to the announcement made last week in the House of Commons by the President of the Local Government Board, to the effect that the Metropolitan Asylums Board have obtained the services of a former medical officer of health to advise them concerning the measures to be taken in view of the possibility of any cholera appearances in London, we are glad to learn that the officer referred to is Mr. Shirley Murphy, lately medical officer of health to St. Pancras. The appointment will give general satisfaction both as regards its object and the person who is to fill it, and it will materially add to the confidence of the public in the action which the Asylums Board may decide to take. Indeed, we hope it is the first step towards the appointment of a permanent medical officer to advise that Board generally on questions affecting its proceedings, for the practice hitherto adopted of seeking such advice first from one official or member of the Board and then from another has certainly not been attended with success when regarded from all points of view, and it is clear that so important a body should not be without a permanent adviser on the medical aspects of their work.

INFECTIOUS HOSPITALS IN PARIS AS CENTRES OF INFECTION.

A DEPUTATION from Paris is now in London, with a view of studying one of the most difficult problems in connexion with public health administration—namely, that of the diffusion of infection amongst populations living in the vicinity of hospitals for infectious diseases. A resolution was recently brought before the Municipal Council of Paris, declaring that the permanence of such diseases as small-pox, typhoid fever, and diphtheria in Paris was due to the aggregation of those sick from these maladies in hospitals within the city, and asking that, for the future, buildings for their isolation should be established outside the fortifications. The question thus raised was deemed too important to be dealt with at once, and a commission of inquiry was appointed to investigate the whole subject. The experience in Paris some years since was precisely the same as that in the neighbourhood of the Fulham Hospital, but Mr. Power's labours in this direction are by far the most exhaustive that have been placed on record. This has doubtless influenced the Commission in their decision to commence their investigation in London. In so far as small-pox is concerned, we believe that any large aggregations of this disease have conclusively been shown to constitute a source of danger to surrounding communities, but experience has not yet proved the same as to the other infectious diseases usually placed in isolation hospitals. Diphtheria is, indeed, somewhat generally believed to be at times carried for considerable distances through the air, and it is quite possible that if large numbers of diphtheria patients were aggregated together, a result similar to that which has taken place as to small-pox might be brought about. But in this country we have as yet not had large numbers of patients suffering from this disease placed in one hospital, and hence we imagine that no useful materials will be found available in England for this part of the inquiry. We trust that, in so far as this may be possible, the investigation of the French Commission will be exhaustive. If it is, we may learn much about our English hospitals which at present has not been made public, and the inquiry may lead to the long-needed English investigation on a wide scale as to the general influence of such hospitals as those belonging to the Metropolitan Asylums Board. The opportunities for such an inquiry in the metropolis are exceptional, and should be made use of. The limited inquiry made by Mr. Power was of immense value; it led to the appointment of a Royal Commission, and it was hoped that the whole subject would be gone into in the same exhaustive manner. So far, however, this has not been the case as regards infectious hospitals generally: but the work already done leads to the opinion that a possible, if not a universally admitted, danger may be avoided if large aggregations of the infectious sick are prevented.

MICROBES IN EQUINE INFLUENZA.

SIX kinds of microbes have been detected by M. Lustig in the fluids of horses afflicted with influenza (*Centralblatt für die Med. Wissensch.*, No. 23). The one of the six that he regards as the germ of influenza forms cultures having a tint varying between clear yellow and citron yellow, with a dull appearance. The islets of the growth spread laterally and downwards, chiefly from the centre. The rate of growth is very slow, but is more rapid in gelatine than in serum of the blood of the horse. It belongs to the class of aërobic bacilli. Inoculated under the skin of the pectoral region of a horse four years old, a culture of this microbe gave rise to a painful inflammatory œdema. The œdema afterwards formed a circumscribed tumour and became indolent, though finally it burst in two places spontaneously. The escaping liquid contained yellow and whitish flakes. This result is regarded as proving the pathogenic nature of the inoculated material.

ROYAL UNIVERSITY OF IRELAND.

THE meeting of Convocation of this University, which was fixed for Tuesday last, resulted in no business being transacted, in consequence of a sufficient number of members not being present. It is a subject of regret that such apathy and indifference should be exhibited by members of Convocation, more especially on this occasion, when the election of a representative on the Senate was expected to take place, and important resolutions were on the agenda paper.

THE LENVAL PRIZE COMPETITION.

A PRIZE of 3000 francs for the best instrument (easily carried) constructed according to the principle of the microphone for improvement of hearing in cases of partial deafness has been offered by Baron Léon de Lenval, of Nice. The jury, in accordance with whose verdict the award will be made, consists of five members, and was appointed by the third International Congress for Otology, held some little time back at Basle. Such instruments only will be admitted to the competition as are completely worked out, and at the examination the perfection of the mechanical construction, the right application of the laws of physics, and above all the power of improving the hearing, will be taken into consideration. All instruments must be sent in before December 31st, 1887, and the awarding of the prize will take place at the fourth International Congress for

Otology to be held at Brussels in September, 1888. The following are the members of the jury: Professors Hagenbach-Bischof, Ph.D., M.D., chairman (Basle), Adam Politzer, M.D. (Vienna), and Burckhardt-Merian, M.D. (Basle); and Drs. Benni (Warsaw) and Gellé (Paris).

ACUTE PNEUMONIA.

IN a report upon the etiology of acute pneumonia, based mainly upon experiments carried on in the laboratories of MM. Vulpian and Cornil, Massalango arrives at the following conclusions (*Progrès Médical*, 1885, No. 32). 1. Every chemical and mechanical agent operating more or less deeply for a longer or shorter time upon the lungs can only induce the lesions of broncho-pneumonia, never those of acute fibrinous lobar pneumonia. 2. The more or less sudden action of cold, as in atmospheric states (the commonly assumed cause of all acute lobar pneumonia) upon animals, has never succeeded in producing the slightest inflammatory change in the pleura or lungs. 3. Nevertheless, there is one agent, a vital one, which is invariably capable of producing this acute inflammation of the lungs, and this is the pneumonococcus, the morphological characters of which have been described by Friedlander and Talamon. At the same time the natural history of this microbe must be extended, for numerous examinations proved its presence in broncho-pneumonia of children and old people, associated with other bacterial forms. In artificially induced broncho-pneumonia of animals the pneumonococcus was never found.

VACCINATION QUESTIONS AT THE ASSIZES.

MR. JAMES ROBERT MARRIAN, of Birmingham, has been charged on an indictment at the Birmingham Assizes with having unlawfully signed a fictitious certificate of successful vaccination in regard to a case alleged to have been vaccinated by his unqualified assistant, and not by himself. It was shown that Mr. Marrian had the same day vaccinated several babies, and it was argued that when a batch of certificates was presented to him for signature he innocently signed the one in question. The judge accepted this view, in the absence of any distinct proof that Mr. Marrian had been warned of the irregularity to which he seemed to have been a party. He was acquitted. We are glad of this; but we should advise all medical men to be punctilious in all matters referring to vaccination, and to give the enemy no occasion to complain.

DR. FERRAN'S INOCULATIONS.

THE *Independencia Médica* says that the Spanish Government has sent a commission to be present at Dr. Ferrán's inoculations in D. Benito, and that it has ordered that no one except Dr. Ferrán himself is to perform the inoculations. This last regulation is considered by our contemporary as an insult to the medical profession, as if the physicians of Spain could not be trusted to give hypodermic injections properly! Of course Dr. Ferrán himself prepares all the bouillons and superintends everything, but it is really too bad to insist on his giving all the injections with his own hands.

THE BACILLUS OF SYPHILIS.

THE bacteriology of syphilis has entered on another phase. MM. Alvarez and Tavel have found in normal secretions a bacillus which has not yet, they aver, been described. This bacillus is identical in its form and colour reactions with that described as special to syphilis by Lustgarten. The above-named observers think it possible that the bacillus of Lustgarten is not the baneful agent of syphilis. The new bacillus is also stated to resemble the bacillus of tubercle and leprosy in many of its characters and reactions. The investigation is, however, confessedly incomplete.

SUPPLEMENTARY EXCRETION OF URIC ACID.

M. BOUCHERON in a communication to the Paris Academy of Sciences, has called attention to the various forms in which uric acid is excreted in addition to the portion carried off by the renal passages, referring specially to the salivary, mucous, and digestive glands. He considers that glandular gout, and certain forms of nasal, bronchial, stomachic, and other catarrhs are manifestations of the supplementary excretions of uric acid being the most easily detected. The presence of a large quantity of uric acid in the saliva may be a premonitory symptom of uricæmic accidents, and a diagnostic sign of the nature of these accidents. The most convenient and rapid qualitative test for uric acid is the reaction of murexide. This reddish-purple colouration can be obtained by causing the successive reaction of the vapours of anotic acid and ammonia upon a few drops of saliva slowly dried in a porcelain capsule by means of a water-bath.

A NEW TEST FOR CODEINE.

RECENTLY we announced the discovery of a new reaction of digitaline (THE LANCET, July 4th) by M. Lafon. This chemist now comes forward with a characteristic test for codeine. A minute quantity, even a fraction of a milligramme of codeine, imparts a splendid green colour to a solution of one gramme of selenite of ammonium in twenty cubic centimetres of strong sulphuric acid. It appears that morphia is the only known alkaloid that gives anything like the same reaction. When selenium is dissolved in strong sulphuric acid, the green colour is the result; and codeine is said to have the power of setting selenium free from the ammonic salt.

A FOUR-LOBED LUNG.

THE right lung of an Irishwoman aged sixty-two was found after death to be composed of four well-marked lobes by Dr. W. A. Edwards, of Philadelphia. According to the description in the *American Journal of the Medical Sciences*, the upper lobe was normal; the middle lobe was somewhat diminished in size, as was also the lower lobe; between the two the fourth lobe was situate. The supernumerary lobe was as long as a man's hand, measuring from six and a half to seven inches; it measured two inches and a quarter at its widest part; its tissue was perfectly normal. The paper in question gives a *résumé* of other recorded cases of anomalous pulmonary conditions.

PRINCE AND SURGEON.

A TELEGRAM from the Berlin correspondent of the *Morning Post* states that Prince Louis Ferdinand of Bavaria, the son-in-law of Queen Isabella of Spain, who has received the diploma of surgeon at the Faculty of Munich, has been of late rendering great services at the hospital of Nymphenbourg, where he is practising.

FOREIGN APPOINTMENTS.

DR. BLUMENSTOCK, Professor of Forensic Medicine, has been appointed Dean of the Medical Faculty for the coming year in the University of Cracow. Dr. Blodig has been elected Professor of Ophthalmology in the University of Gratz.

WE understand that the report of Drs. Klein and Gibbes upon their investigations in cholera has been presented to the India Office, but that its publication is postponed until the further portion of the report, contributed by the other members of the Commission in India, has been received by the Government.

ON the 10th ult., the death, from fever, occurred at Sierra Leone of Mr. Nathaniel Cameron. The deceased, who was a native of Abernethy, on Speyside, had a distinguished career at college, both in arts and medicine, carrying off high prizes in both departments. In 1876 he graduated at the Aberdeen University with the highest academical honours, and subsequently became Assistant Demonstrator of Anatomy in that University. After acting as resident physician at the Macclesfield Infirmary for a brief period, Mr. Cameron in 1878 entered the Army Medical Department, and went out to Sierra Leone, where, as above stated, he died.

THE salary of Mr. S. W. North, the medical officer of health of the York Urban Sanitary District, has been increased from £150 to £250 per annum. At the meeting of the York City Council, at which the resolution was proposed and carried, a characteristic remark was made by one of the councillors—viz., that "Mr. North had caused the property in that neighbourhood to decrease very much in value." The medical officer could scarcely desire better testimony to the value of his services.

THE polluted state of the river Wey is causing considerable discussion, and several writers in *The Times* have recently called attention to the fact that this river, which used to be a source of delight, not only to those who lived by its borders, but also to the numerous visitors, artists, and others who came to enjoy the lovely scenery, has become little else than an open sewer for the towns of Godalming and Guildford.

DR. ALLARD, physician to the International African Association, who has returned to Brussels after a stay of three years in the Congo territory, has assured a representative of the *Indépendance Belge* that all the stations are in a flourishing condition, that the report that a high rate of mortality prevails amongst Europeans is false, and that the climate is not insupportable, as has been alleged.

AT the competition examination held this week at the London University, Burlington-gardens, for admission into the public medical services, we understand there were seventy-eight candidates for thirty appointments on the Army Medical Staff, twenty-two for seven in the Indian Medical Service, and twenty-two for sixteen in the Royal Navy.

AT a recent meeting of the Finchley Local Board, Dr. Turle, the medical officer, stated that the epidemic of whooping-cough in the district is so severe that he could not give the Board an approximate idea of the number of cases, they being so numerous that the local medical men had been unable to keep an account of them.

MR. A. O. MACKELLAR, M.Ch., F.R.C.S., senior assistant-surgeon to, and lecturer on Practical Surgery at, St. Thomas's Hospital, has been appointed Chief Surgeon to the Metropolitan Police, in the place of Mr. Timothy Holmes, F.R.C.S., resigned.

THE Municipal Council of Marseilles on the 11th inst. voted 100,000 fr. for sanitary improvements. On the same day, at the Paris Academy of Medicine, Dr. Brouardel read a paper on the Bad Sanitary State of Marseilles, severely blaming the negligence of the municipality.

THE *Russkaya Meditsina* says that a medical man recently bought five pounds of camomiles at an apothecary's in Moscow, and on sifting his purchase found a full pound of sand!

THE *Odessa Vestnik* states that a bacterioscopical laboratory has been organised at the town hospital by Dr. Stroganov.

THE Russian medical journal *Vrach* is sending a commission to Spain to study the cholera, consisting of Professor Manassein, the editor, and Drs. Raptschevski and Kurlov.

REPORT
OF
The Lancet Special Commission
ON THE
SANITARY CONDITION OF WINDSOR.

WINDSOR has acquired an unenviable reputation for bad sanitation. This is no new complaint. The grievance rests rather in the fact that the evil, though frequently denounced and of old standing, has never yet been satisfactorily remedied. Even in the time of William IV., when someone was speaking of the approaches to the Castle, the King retorted by qualifying them as the reproach of Windsor. Charles Knight, in 1859, published a humorous denunciation of Windsor, which was his native town. Again, in 1871, some sensation was caused by a detailed technical description given in the columns of the *Builder* of the hotbeds of small-pox that existed in the Royal town; and in 1876 the rector of a parish containing some of the worst slums commenced an agitation, which is still pressed forward with great energy. The authorities have, however, shown exceptional apathy. Public opinion has certainly compelled them to attempt a few slight improvements, but such measures have been taken reluctantly and under protest that there was no cause of complaint. Thus, for nearly fifteen years there has been no revision in the borough bye-laws, though during that time all the more important towns of England have not failed to so recast their sanitary regulations as to make them harmonise with the modern principles of hygiene. Nor is this progress limited to the towns; even the neighbouring rural district of Windsor issued new and admirably conceived bye-laws bearing the recent date of August, 1881, but the town itself is still content to abide by the inferior stipulations enacted by the Windsor Board of Health in 1871. Finally, if we add to these circumstances the fact that the medical officer of health reports the number of deaths during this summer to be above the average, sufficient cause will be found to justify a special inquiry.

Three considerations naturally suggest themselves as reasons why the health of Windsor should be a matter of special solicitude. Firstly, it is a Royal residence and a garrison town; secondly, it is only separated from Eton College by the river; and thirdly, it is visited by a large number of tourists and excursionists. We find, on the contrary, that the town is infected by a poisonous ditch; that the inhabitants are still allowed to drink contaminated well-water; that there are slums within a stone's throw of the Castle gates which are hotbeds of epidemic disease; and that, even in the wealthiest quarters, complaints are constantly made of sewers that smell, and open ditches which receive refuse, soil, and the overflow from cesspools. Further, while so little concern has been shown to prevent epidemics, no steps whatever are taken to cope with them when once they have broken out. There is a sort of hospital consisting of a few private houses strung together, but no fever case would be received into it; and, indeed, it is doubtful if this building possesses the necessary sanitary qualifications for ordinary purposes. At the present moment the wards are vacated, and an investigation is taking place. When fever breaks out the case must be treated at home, however unsuitable the home may be. Thus, in July last year, a case of small-pox occurred in a narrow court immediately opposite the principal entrance to the Castle.

A trooper belonging to the Horse Guards (Blue), happening to visit this house, caught the disease, which developed itself in a virulent form. The regimental surgeon applied to the civil authorities to have the man removed; but, on being told that this was impossible, the military hospital at the cavalry barracks had to be cleared out, and the patient was treated on the spot, at the risk of infecting the entire regiment. A little later one of the officers' grooms also caught small-pox, and as this man was, technically speaking, a civilian and lived out of barracks, the civil authorities were once more requested to remove the sufferer. The house where the man lodged was inhabited by many other persons connected with the regiment, so that the health of the Guards was again imperilled; but if in this case the claim on the civil authorities was more clear, the means of satisfying the demand were equally wanting. There being no hospital, no provision of any kind whatsoever, for the treatment of infectious disease, nothing could be done. The patient remained where he was, and the military authorities had to incur the expense of clearing the house of all its lodgers, in order that the epidemic should not be brought to the barracks and the Castle. Nor was this the only danger and inconvenience that arose from the case. The patient was of course not so well watched as if he had been confined in a fever hospital, and consequently he contrived to make his escape. He walked about the town and paid a number of visits just at the time when the disease had reached its most contagious stage. Such incidents clearly indicate the imperative necessity of profiting by the facilities the law affords to create at least a cottage hospital for the infectious cases that may occur in Windsor. When it is more generally known that the local authorities have neglected their evident duty in this respect, the nation will demand, with no uncertain voice, that the Royal Household, the Guards, and the thousands of visitors who yearly enrich the town of Windsor shall no longer be exposed to the dangers that must arise from this gross neglect.

The question of the housing of the poor at Windsor is not so easily solved. It may be objected that the town is hemmed in by the Thames on one side and the Castle and Royal park on the other; yet if we compare this difficulty with the obstacles encountered in the metropolis of London, it will seem but a slight excuse. In any case, there are fairly good cottages at Windsor, rented at a moderate charge, that suffice to show what could be done if proper pressure were brought to bear. Bier-lane is the best known slum of Windsor. It leads straight up to the Castle, and terminates, almost under the walls of the Royal residence, with a common lodging-house, a rag and bone warehouse, and a private slaughter-house. A stone thrown from any of these points would reach the Castle walls or pierce the windows of the guard-room—that is to say, the part of the Royal residence which, being necessarily the most crowded, is the most likely to harbour and develop the germs of disease. More than thirty years ago, when this district was decimated by the cholera, a medical man who greatly distinguished himself during the epidemic urged that the whole place should be burnt down, as nothing else "could get rid of such a plague-spot." Neither this declaration nor the subsequent visit of small-pox has materially altered the character of Bier-lane. The poorest as well as some of the most disreputable persons congregate here, or rather in the little courts which lead from the lane. In Garden-court we found that on one side there were no back windows to the houses, while one of the gullies smelt so foul that the people living near dare not open their front windows. Thus, especially during the night, they remained confined in ill-ventilated rooms. The houses were damp, the closets without water, and the rooms, though in many instances occupied by several people, who systematically kept the windows closed, only contained about 700 cubic feet of air. Next to Garden-court is Red-lion-row, which has been closed quite recently. Here the sleeping-rooms did not measure 400 cubic feet. The water, obtained from a pump close by, sparkled and effervesced with the decomposition of the organic matter it contained.

The scandal created by the continued use of such well-water, when the town has at its disposal a fairly good supply which can be given to all these districts direct from the mains, has at last resulted in the investigation of the subject. The medical officer of health may be congratulated on having made the borough analyst examine water drawn from twenty pumps; for no less than eleven of these were found to be polluted. In his official report Dr. Casey states: "I think it no exaggeration to say that the larger number of the wells, in the older parts of the town at least, are dangerously polluted." To this we would add that even those wells which were proved not to be contaminated at the moment when the specimens of water were taken from them may become impure at any subsequent period. For instance, in another offshoot of Bier-lane, known as Collins's-buildings, we saw a pump supplying thirteen cottages which had not been condemned. Within a few feet of this pump there was a gully which had become clogged, so that all the foul water, instead of running into the drain, formed a pool. These slops, gradually sinking into the soil, must have found their way to the well, and perhaps another analysis would give a less favourable result. At the end of the court there are four closets for the use of these thirteen cottages; but one of the closets, being out of repair, was locked, another was clogged with soil up to the rim, and only the remaining two closets could be used. There was no water, and, to judge by the amount of garbage lying about, the dustman had been remiss in his visits. On referring to the description of this court published by the *Builder* of March 25th, 1871, it will be observed that it agrees in every particular with what we saw in July, 1885. Fourteen years and a smart epidemic of small-pox have wrought no improvement!

South-place is equally notorious for its insalubrity, but it does not occupy so prominent a site. It consists of forty-two houses with 114 rooms, and a population that varies considerably from day to day. On one occasion 210 inhabitants were counted, though the medical officer of health estimates the average population at 171, the death-rate at 22·2, and the zymotic death-rate at 2·3 per 1000. The forty-two houses have in all fourteen closets, but no water is laid on to any of them. Some of these houses are situated at the entrance of the narrow thoroughfare, and these have five closets of their own; the other nine closets are used by the remaining twenty-nine houses. On one side of the street the dwellings have back yards, and here the closets are placed; but ten houses on the other side of the street have no back yards, no back windows, and no closets or sanitary arrangements whatever. The inhabitants, amounting to forty-nine persons in July last, had to cross the road and go down narrow passages leading to the back yards of the houses opposite for all sanitary purposes. But now that the Rev. Arthur Robins, chaplain to the Queen, the Prince of Wales, and the household troops at Windsor, has, by every possible means, sought to excite public opinion against this state of affairs, some of the landlords have taken alarm. One of these has declared that he means to watch and prosecute for trespass anyone coming from the other side of the street to use the closets on his side. If this threat is executed, what will happen to the inhabitants of the ten houses that have no closets? As it is, we examined the nine closets, and in two only was the water of the trap visible; the others, not being sufficiently flushed, were choked with solid material. Considering that there is no water laid on and that it is no one's business to bring buckets of water to flush the closets, this and the dirty condition generally of the pans are in no wise surprising.

Poverty and wretchedness prevail throughout South-place, and measles had been raging in a large number of houses. The provision made for the household refuse is not better than the drainage. There are no proper dustbins, and the cinders and garbage are piled up against the walls of those houses that have back yards. There is no covering for the heap, so that the wind can blow the particles about; while the rain, after soaking through the festering rubbish, attacks the walls, and makes its appearance in the back rooms of the houses; this was notably the case at No. 20. In another house, No. 42, we found a good illustration of the general carelessness prevailing. This was one of the superior houses, for it had a closet and back yard of its own. But in the back yard there was a square hole to carry off the rain and slop water. At the summit of the hole a pipe led off in the opposite direction to that of the closet drains, and the occupier explained that this pipe went to a dead well, thus infecting the whole surrounding subsoil. To fill up the dead well and establish a proper connexion with the sewer would, we were informed, cost two pounds, and therefore nothing had been done. The fact, however, that the cost has been ascertained shows that the responsible parties are aware of the defect, and the display of a little energy on the part of the authorities would easily ensure the application of the law. That these poor cottages can be properly drained

may be seen within a few steps of South-place, either at the cottages behind the "Prince of Wales" public-house, or at Mechanic's-court, near the Castle. Here the pans are clean, the traps full of clear water, and no odour prevailing; but these closets have a suitable waste-preventer and a two-gallon flushing apparatus. What has been done here can with equal facility be done elsewhere, if the authorities only insist upon it.

In Sidney-place we also saw much wretchedness and bad sanitation. Here the houses have very narrow back yards, unflushed closets, and uncovered dust-heaps. The stench is naturally blown into the smashed windows of the basements of the houses, and from thence is drawn by the heat into the upper rooms through the dilapidated flooring. On entering some of these rooms we encountered a very fetid odour, and the walls were smeared with crushed vermin. In one room a bed had fallen through the ceiling, so rotten was the structure of the house; and here a poor woman resided with her husband and six children. They had two rooms, two beds, hardly any bedclothes, and no furniture. The husband earned fifteen shillings a week, the woman was too ill to help, and they had to pay five shillings rent. The soil-pipe of a linendraper's establishment next door joins on to the closet of this miserable abode, and sometimes this one pipe becomes so clogged that the soil comes up through the gully trap in the little yard outside the closet door. A boy in this house, we were informed, has had scarlet fever, and a girl next door died of the same complaint.

Similar harrowing details might be given concerning other slums of Windsor: Clarence-clump, Love-lane, some of the courts off Peascod-street, Prospect-mews, &c. The details of the number of houses, the insufficient supply of closets, and the total absence of water will be found in the recent reports of the borough surveyor. The medical officer of health, in one of his reports, thus describes Prospect-mews:—"Wheeler has two rooms, one of which, being without fireplace and having about 760 feet cubic space, though with two windows, was occupied by five persons. The other, a small room, was used as a day room, and at night by two persons. Edwards has two sleeping-rooms, with about 578 and 681 cubic feet space respectively, the latter having no fireplace. The family number eight persons. They have also a very poor room in another house, used as a day room, and not available as a sleeping-room. His family have been suffering from scarlet fever, and are paupers. The dwellings in Prospect-mews are not suitable for occupation by families, and ought not to be let for that purpose."

This was written a year ago, but nothing has been done to improve the place, though the mayor's private house faces the entrance to the mews. Close by, also, in the main street, there has been a death from typhoid fever during the last week of July this year. We carefully examined this, a higher class house, and for which an annual rent of £24 is paid. The closet, in the back garden, had formerly been supplied with water, but the water was now carefully cut off! In the basement there is a sink with a huge three-inch open and untrapped pipe. A bell-trap in the centre of the floor was quite dry, and allowed the escape of very foul effluvia. Within a dozen yards of this house there is a large boys' school, and the other neighbouring dwellings are inhabited by married soldiers and their families. Indeed, there is much to be done at Windsor with respect to the drainage of the better class of houses, which are let at £40 to £50 a year. In the suburbs of Windsor the villa and country residences have cesspools, with overflows into the open ditches. This is notably the case at Spital. The water in the ditch of Clewer-house-lane is quite black, and we received numerous complaints of the abominable nuisance this occasions. The Bourne ditch is a still greater annoyance and danger, for it runs right through Windsor. Two handsome villas have remained unlet for seven years because of their proximity to this ditch. The persons who live in the houses a little further off complained to us of sore-throats, fever, rats, and bad smells. We are also assured that there have been recently seven cases of diphtheria at Windsor, one ending fatally. The medical man in attendance attributed this latter case to the Bourne ditch, which passed close by the patient's house.

Another grave defect in Windsor sanitation is the fact that the whole of King's-terrace and several other cottages are built below high water mark. It is therefore not only extremely difficult to drain this district and to prevent dampness, but the quarter is subject to very serious floods. On one occasion the whole district was under water, which rose to the height of about three feet in the parlours. The contents of the closets were of course brought up with the water and distributed over the entire terrace. The houses could only be approached in punts. Naturally the quarter is unwholesome, and we found that a severe epidemic of measles had attacked the entire terrace. In every house we entered the same melancholy story was told us. At No. 23 and No. 24 all the children were down with measles. At No. 21 six children had suffered from the same cause, and the inhabitants pumped up slugs with their drinking-water—for wells are allowed in this low-lying and dangerous district. Under such circumstances an outbreak of cholera would surely prove most fatal in King's-terrace. The closets, the wells, the sinks, the gullies that carry off the slops, are all within a few feet of each other, and constructed in the damp soil below the river level. Building under these conditions should not have been authorised.

Of the general drainage—that is, the sewers of Windsor—we cannot say much. The absence of the borough surveyor prevented our obtaining full details. Considering the number of complaints made of smells emanating from the sewers, we should imagine they were insufficiently flushed. The communications from the gutters to the sewers are trapped, and Baldwin's ventilators placed in the centre of the street. There are twenty-two flushing stations, which provide a 1000-gallon flush. The flush is discharged three times a week at two stations, twice at two other stations, and only once a week at the remaining places. This, especially in dry weather, we should imagine to be altogether insufficient, particularly when we bear in mind the large number of closets that have no water at all. In dry weather, at least, we would recommend automatic flushing tanks, discharging their contents every two hours.

Much more could be added concerning the sanitation of Windsor, particularly if we described in full the condition of the better class of houses, and criticised the general engineering details of the sewers and the treatment of the sewage at the sewage farm. We might also examine and explain the apparently small death-rate of the town. This is in all probability due to the very low birth-rate, the small number of children, and the presence in the population of an exceptionally healthy element—namely, soldiers, their families, and the attendants at the Castle. In spite, however, of this particularly favourable circumstance, the town is specially open to the danger of epidemic disease; and, considering the possible advent of cholera, we have said sufficient to show that there is urgent need of energetic sanitary reforms in the Royal borough of Windsor.

ENTERIC FEVER AT THE WEST LONDON DISTRICT SCHOOL.

BY PETER W. DELAMOTTE, M.R.C.S. ENG.,
MEDICAL OFFICER TO THE SCHOOL.

IN THE LANCET of August 1st mention is made of a serious outbreak of enteric fever at the West London District School at Ashford, and that there are no satisfactory statistics of the health and mortality in these sorts of schools. In the same issue is an interesting contribution on "The Relation of Typhoid Fever to the Level of Subsoil Water"; it is to this relation that I am desirous of adding some decided evidence condemning subsoil water, and to record what has taken place at the school. Your observations referring to the health and mortality of the children in this school I can vouch for, and feel sure of both comparing favourably, considering the class of children, with any other institution of its size, be it pauper or private; on this question I hope to be able to render an account at some future date, when more time is at my disposal.

The object of this report is to give briefly a few facts in connexion with this very serious outbreak of enteric fever in its relation to the water-supply. My remarks may be prefaced by stating that the building is situate on a gravel soil, and its surrounding grounds are on a dead level with a gravel subsoil. The school was opened in 1872, and is certified to accommodate 700 children, from the ages of three years to

sixteen, of both sexes. The earth-closet system is in use throughout the building for all excrementitious matter, with the exception of one watercloset at the engineer's, discharging itself into the general system. The closet is within ninety feet of the well. The present drainage system came into operation in December, 1883, and is of the same kind as that of Eastbourne—namely, the "Shone system," being a continuous distribution of the sewage minus the excrement, except in one instance that I have already mentioned. This new sewerage extends to land not previously irrigated, and may account for the small number of cases in 1884. The system adopted before the Shone was to collect the sewage in a tank and then pump it on to the ground. The old sewers are made use of occasionally in dry weather. The sewage irrigation has been going on since the school was opened, but not in any part of the grounds where the children are allowed their pastime, or in the vicinity of the well. A few cases of abortive typhoid and typhoid fever have arisen from time to time, but not in sufficient numbers to cause suspicion that the water was contaminated, though it was analysed and pronounced to be fit for drinking purposes. The number of cases of enteric fever in 1881 was three, in 1882 two, in 1883 twenty-one, and in 1884 five. Professor Corfield visited the school in February, 1882, and reported that the position of the sewage tank and the boys' earth-closets were probably the cause of the sporadic cases; most of them arose on the boys' side of the building, and it was anticipated that as soon as the tank was removed and the closets improved upon enteric fever would have disappeared, but still cases occasionally arose. The water was again analysed and reported to be fit for drinking; therefore, as far back as 1882, every effort was made by the managers and their officers to discover and remove the cause, but without avail, From the beginning of March, 1885, to about the third week in March, the school was free from typhoid. Towards the end of the month one or two cases were admitted. The engineer and some of his family were attacked; they reside in the engine-house, about eighty or ninety feet from the well. The medical attendant did not at first diagnose enteric fever, and the excreta were disposed of in this the only watercloset. The ground over the site of the old sewage tank had been dug up and planted with trees, and there had been continued dry weather. Dr. Bridges, Local Government Board inspector, advised that the water should be again analysed. Six samples of the same water were taken from various parts of the building after a heavy rain on June 9th, and on the 18th of the same month Professor Heaton, of Charing-cross Hospital, reported, after giving a quantitative analysis, as follows: "These waters resemble one another closely, and have evidently had a common origin. Unfortunately all must be condemned absolutely as drinking-water; for although the total solids, chlorine, free ammonia, and nitrogen are not excessive, and the albuminoid ammonia moderate in all but Nos. 1. and 5, the presence of phosphates in considerable quantities, the bad smell of the water and ignited residue, and, above all, the great number of living and dead bacteria, point the waters out as eminently dangerous." Steps were at once taken to boil and filter the water until a supply from a wholly different source could be obtained. The well from which the school was supplied is close to the engine-house, is twenty feet deep, sunk in a gravel soil lined with iron cylinders bolted together, and four feet in diameter. No direct contamination could take place from any material passing in at the sides. The distance from the top of the well to the water is eight feet, leaving twelve feet of water; this is lowered to the extent of one foot within five minutes after the steam pumps are set in motion, and remains at this level after pumping the daily requisite quantity, 25,000 gallons. Within five minutes after the pumps cease the water rises to its former level. It may be inferred that this well must drain a large subsoil area, considering the large quantity (25,000 gallons) daily taken from it; and it would appear it must have drawn water from parts of the ground where irrigation by sewage was going on. Though previous analysis failed to detect impurities, there cannot be much doubt, after Mr. Heaton's report, that the water in some way was the cause of these sporadic cases.

The present outbreak occurred in June and July, affecting nearly 250 children, causing six deaths. It may be concluded from Professor Heaton's report, the large number and the sudden way in which they were attacked, that either some typhoid contagium entered the water, or else, from the continued dry weather and the heavy rain following, this subsoil water became still more polluted and gave rise to this serious outbreak. Probably it is only occasionally that the water becomes polluted, and it had been observed by me that cases arose after a fall of rain. In the former analysis of the water no particular time was fixed upon to take samples, and the large and never-failing quantity made use of tended rather to make one think the water to be of a wholesome character. On June 18th the children were cautioned not to drink any water but the boiled and filtered; and it was not until the water was entirely cut off that the cases of fever rapidly decreased. The water is now obtained from a water company.

The period of incubation cannot be fixed, and the probabilities are that the cases were already incubating before the boiling and filtering took place. The patients, with one or two exceptions, are doing well; some are convalescent, and others fast approaching it. They are all treated in large, well-ventilated wards, under sisters and trained nurses, both day and night. Mr. F. J. Warwick, M.B.Cantab., has been appointed assistant resident medical officer *pro tem.* It is not for me to theorise about the cause of the outbreak, as it is self-evident. The water was a never-failing supply in the driest weather, and 25,000 gallons a day had been pumped from the bottom of this twenty-feet well in a gravel soil for upwards of fifteen years, supplying 800 or 900 people. Analysis had never detected any impurities up to a certain date. It had caused no epidemic; but given two dry consecutive summers, then a few hours' rain, and this previous pure and never-failing water becomes highly dangerous, as proved by Professor Heaton. No accumulative cesspool filth could have been washed into the well, as in the Terling epidemic; but that sewage did get in, and that it must have entered at a distance varying from 100 feet to 100 yards, and must have been drawn into the well through the gravel, is without doubt.

Pharmacology and Therapeutics.

STROPHANTHUS HISPIDUS.

WE understand that Dr. Fraser, Professor of Materia Medica in the University of Edinburgh, is about to publish the result of his researches on the physiological action and therapeutic uses of the "kombé arrow poison" (Strophanthus hispidus), a subject which has engaged his attention for nearly fifteen years. The plant is a woody climber growing freely in the forests both of the mountains and valleys of many parts of Central Africa. In the Manganga country near the Zambesi, it is known as kombé, but in the Gaboon district it is called "inée," "onaye," or "onage." It climbs the highest trees, hanging from branch to branch in graceful festoons like a wood vine. Its flowers are pale yellow, and last only a very short time during the weeks which immediately precede the rainy season. The fruit ripens in June, and is collected by the natives with much care and many mystic ceremonies. From the seeds is extracted a juice in which is dipped the points of the arrows used for shooting wild animals. Dr. Livingstone, in his well-known narrative of the expedition to the Zambesi, refers to its employment in this way, and says that the poison is so deadly that a beast on being struck at once falls to the ground paralysed. The follicles, specimens of which we have examined, are about a foot in length, and contain from 150 to 200 seeds, each bearing a beautiful delicate plumose appendage mounted on the extremity of a thread-like stalk some three or four inches long. From the seeds Dr. Fraser has succeeded in extracting a principle of very great activity which he has named "strophanthin." When examined under the microscope, it is seen to be composed of myriads of delicate interwoven crystals of all shapes and sizes. Injected under the skin of a frog, it arrests the action of the heart, causing complete stoppage of that organ, the ventricle being found pale and contracted, whilst the auricles are dark and distended. There seems to be little doubt that it acts directly on the cardiac muscular fibre. In physiological action it is allied to digitaline, the active principle of the common foxglove, although it exceeds it in activity, and differs from it in many important particulars. It is probable, too, that it is related to antiarin, the poisonous principle of the deadly upas tree of Java. We believe that Professor Fraser has succeeded in laying down

definite rules for its administration in various forms of heart disease, and it is likely that it will be extensively employed. It must be satisfactory to him to reflect that he has been enabled to add to our list of remedies an agent which hitherto has been employed only as an instrument of destruction.

CHEMISTRY OF RHUBARB ROOT.

An interesting article by M. Kubli on the Chemistry of Rhubarb Root has been reprinted in the *Pharmaceutical Journal*. Schlossberger and Döpping first recognised the presence of chrysophanic acid in rhubarb, but Kubli showed that the acid only existed in the form of a glucoside, which broke up when boiled with acids into chrysophanic acid and sugar. Dragendorff confirmed this observation. From a series of experiments it is concluded that chrysophanic acid is first formed in rhubarb root upon the digestion of the latter with water, and that little or none of this acid exists preformed in the more important kinds of rhubarb. The ferment on which the decomposition of the glucoside depends is soluble in water, but not in alcohol. The tincture made from rhubarb root by means of dilute spirit continually deposits a precipitate which Clarke states to be composed chiefly of chrysophanic acid. In the tincture there are both the glucoside and the ferment. In all the official extracts prepared by macerating with water there is abundance of chrysophanic acid and very little of the glucoside. Chrysophanic acid possesses powerful antiseptic properties, and it is probably to it that rhubarb owes its beneficial action in various gastro-intestinal disorders. It is argued that the glucoside (chrysophan) would have a more energetic action, inasmuch as the chrysophanic acid would be formed in the stomach, and would then be in a nascent condition.

PYRIDIN IN ASTHMA.

Rosenblüth publishes in the *Vrach* the results of observations on the use of pyridin in asthma. Pyridin is a triamine obtained by the dry distillation of various organic substances, and was first described by Anderson in 1851, and subsequently made the basis of therapeutical researches by Bochefontaine (1883). It is a transparent, strongly smelling liquid, which acts on the central nervous system and the respiration, but not on the heart. The author tried the remedy in Paris on fourteen asthmatics, in five of whom there was cardiac mischief with dropsy. These five were considerably relieved. Three patients with nervous asthma were cured in from eight to fifteen days. In one case which was complicated with chronic bronchitis the attacks also ceased. In three cases of asthma with emphysema, and also in one case of nervous asthma which had lasted from childhood, the remedy produced marked improvement. In only one case had its use to be stopped, because it produced giddiness and vomiting. The way to use it is to pour four or five grammes (about a fluid drachm) into a plate and set it in a small room to evaporate, the patient remaining in the room an hour and a half three times a day.

ADULTERATION OF IODOFORM.

M. Biel (*Journal de Pharmacie et de Chimie*) draws attention to the adulteration of iodoform by picric acid, which is less costly than iodoform, whilst having the same melting-point (117° C.). Further, it dissolves with the same facility in alcohol and ether, and possesses the yellow colour and crystalline structure of iodoform. Toxic effects may be produced by this adulteration, and pounding an adulterated specimen would cause explosions in the mortar. If the suspected article be agitated with cold water, there results a yellow fluid, which should be filtered. The addition of a little cyanide of potassium causes the development of a brown colouration if picric acid be present.

LACTATE OF QUININE.

The lactate of quinine is, of all the salts of quinine, the most soluble in water and the most rich in alkaloid. The valerianate and hydrobromate, though rich in quinine, are not nearly so soluble as the lactate. An ointment of lactate of quinine, one gramme of the salt to nine grammes of lard, has been employed for inunction into the axillæ. As a hypodermic injection the lactate is believed to be better than any other salt of quinine. One gramme of lactate is dissolved in four grammes of distilled water; this mixture is warmed and filtered. The solution should be neutral. The ordinary syringe would take up the equivalent of 20 centigrammes of the salt. M. Vigier has never witnessed any local mischief as the result of these injections.

DAMIANA.

The leaves of damiana possess a laxative action, as well as tonic and diuretic properties. American journals speak of it also as a powerful aphrodisiac. It has proved of value in all cases of sexual debility in both sexes, and even in those cases where strychnia, phosphorus, and electricity have failed to give benefit. Usually an infusion made from all parts of the plant is employed; it has an aromatic odour, and tastes like cedar. The liquid extract is also prepared, and of this a teaspoonful may be prescribed three times a day for two or three months. Various nervous affections, renal disease, and diabetes have been treated with it. The leaves are at times adulterated with those of Aplopappus discoideus.

ACTION OF ANTIPYRIN AND KAIRIN COMBINED.

Dr. Mingazzini has made some observations on the effect of a combination of antipyrin and kairin in typhoid fever, and finds that the temperature is lowered slightly more than when antipyrin alone is used. The duration of the fever did not appear to be more affected than when antipyrin was given, but the perspiration was more decided, and Dr. Mingazzini thinks this is an evidence of an increased action on the system.

GUACHAMACHINE.

The action of curare is almost as variable as the name by which it goes. Recently, Dr. Kobert has given it as his opinion that "guachamacha," which is most probably Malonetia nitida, enters largely into the preparation of curare or woorali. It is believed that the alkaloid of guachamacha will turn out to be identical with curarine.

INODOROUS IODOFORM.

According to M. Gillette iodoform may be rendered inodorous by the addition to it of 1 part of sulphate of quinine and 3 parts of charcoal to 100 parts of iodoform.

HEALTH OF THE ARMY.

No. III.

DURING the year 1883 there were 59,436 recruits medically inspected, of whom 23,595, or 397 per 1000, were rejected as unfit for service. This was considerably under the ratio rejected in the preceding year. Of the recruits primarily inspected by army medical officers 400 per 1000 were rejected, but of those by civilian medical practitioners only 159 per 1000. Of the latter class, however, 201 per 1000 were found unfit on secondary inspection by army medical officers, thus raising the proportion among them to 360 per 1000. Of every 1000 recruits enlisted 773 were natives of England, 91 of Scotland, 125 of Ireland, and 11 of British colonies and foreign countries. Compared with the results for 1882 this shows an increase in the proportion of English, and a decrease in that of Scotch and Irish, recruits. Calculated on the male population at all ages, as shown by the census of 1881, the proportion of recruits would be 3·63 per 1000 in England and Wales, 2·99 per 1000 in Scotland, and 2·94 per 1000 in Ireland. The Foot Guards had the lowest ratio of rejections, amounting to only 315 per 1000; and the Departmental Corps the highest, being 432 per 1000; the rejections in the infantry were about 23 per 1000 higher than in the cavalry or artillery. The returns show an improvement in the education of the recruits; 124 per 1000 were reported as unable to read, and 78 as able to read only, both considerably under the proportion in the preceding year. The most frequent cause of rejection was "under chest measurement," amounting to 126 per 1000; and next to it "defective vision" in 35·8 per 1000. Among the causes are assigned "under height" in 23, and "apparent age not in accordance with general orders" in 11·4 per 1000. But both of these should clearly be taken cognisance of by the recruiting officer, and the men should not have been sent for medical inspection. If they were deducted, the proportion of rejection for medical causes would be reduced to 362·5 per 1000. There were 4, or ·07, per 1000 rejected for "over height," but no information is given as to the height of these giants, nor are we aware of the existence of a maximum height beyond which recruits are deemed ineligible. We presume there must have been a reduction in the minimum age at which recruits were to be enlisted, as there was an increase,

compared with the preceding year, of 211 per 1000 in those from eighteen to nineteen; but there seems good reason to doubt how far this difference is correct in point of fact, for there has been a decrease of 166 per 1000 between nineteen and twenty. These two facts combined lead to a strong suspicion that, under the previous limit, there must have been a systematic overrating of their ages by lads who were anxious to enlist, but were under the regulation age. There has been a decrease also, though by no means so marked, at all the ages above twenty. There has been a very great increase in the proportion of recruits from 5 ft. 3 in. to 5 ft. 4 in. in height, and a considerable one also in those from 5 ft. 4 in. to 5 ft. 5 in., and a decrease at all heights above that. In the weights of the recruits there has also been a great falling off; there were 277 per 1000 under 120 lbs., while in 1882 the proportion was only 171 per 1000. The chest measurements yield similar unfavourable results, there being a considerable increase in those under 34 in., and a corresponding decrease above that size. These results, we fear, show too clearly that in order to raise the additional number of recruits required for the army in 1883, it was necessary to reduce the standard of physical quality as measured by age, height, weight, and chest development.

The reports of the various principal medical officers on the sanitary condition of the stations under their charge afford good evidence that this very important subject is not overlooked, but that all defects likely to prove injurious to the health of the troops are brought promptly to the notice of the military authorities. That they are not always remedied so quickly as might be desired is a consequence, no doubt, of the expense involved in the necessary measures of improvement and the difficulty of extracting from the Treasury the amounts requisite for the purpose; but the work appears to go on steadily, and the results, as shown by improved health and a reduced death-rate, fully justify the expenditure involved in efficient sanitation.

We regret again to miss from the Appendix the annual "Report of the Progress of Hygiene for the Year," begun by Professor Parkes, and so ably carried out by him and, till the last two years, by his successor, Dr. De Chaumont. But there are some valuable papers on other subjects. Surgeon-General Longmore has furnished a report of several very interesting cases of wounds and injuries received in Egypt during the campaign of 1882, which, on being invalided to England, came under his care at Netley. He has also prepared a short paper on the important subject of "First Field Dressing Packets," and "a report on the Conference held at Geneva between the 1st and 6th of September, 1884, by the representatives of various Governments and National Aid Societies, at the invitation of the Red Cross International Committee of Geneva." In the latter he has given a brief history of the origin of the Geneva Convention of 1864, and the subsequent international conferences, with a notice of the national aid societies which were thus called into existence. This is followed by a report of the discussions on the various questions submitted to the Geneva Conference of 1884, which Professor Longmore attended as the delegate of the British Government; and it concludes with a detailed account of the exhibition at Geneva of improvised ambulance equipment, by Dr. Port of the Bavarian Army, under the three heads of—(1) improvised means of carriage of patients; (2) improvised means of dressing wounds in the field; and (3) improvised means of hospitalisation. The paper is one of a very practical character, and deserves the careful study of all who are interested in such questions.

Surgeon-Major Godwin has contributed a good surgical report of cases of wounds treated in the Second Division of the Victoria Hospital at Suez, of which he was in charge. The Appendix also contains a reprint of the instructions issued by the Director-General for the information of the officers of the medical staff of the Suakim Expeditionary Force. As we noticed these fully when they were first issued,[1] it is unnecessary to make any further remark upon them than again to commend them to the attention of all officers (military and medical) who are ever likely to be employed on field service. The report, of which we have endeavoured to bring to the notice of our readers some of the most important points, contains much valuable information, and is well calculated to maintain the reputation of the department from which it emanates.

[1] THE LANCET, March 21st, 1885.

PHOTOGRAPHY AND MEDICAL JURISPRUDENCE.

THE GALTON COMPOSITES IN THEIR RELATION TO THE DETERMINATION OF IDENTITY.

BY WILLIAM MATHEWS (BRISTOL).

[SECOND NOTICE.]

THE achievement of consolidating into a single typical photograph the portraits of six or seven separate sitters has naturally awakened some curiosity. Other and yet more remarkable operations may be expected to follow. Little by little the field of inquiry will extend itself. In the natural course of evolution, possibilities will loom into view that, thus far, are not within the scope and purpose of the experimentalists. One of the more inevitable of these approaching developments falls so entirely within the pathway of procedure that its investigation cannot be much longer postponed. In this very novel portraiture of the "composite order" there are some attendant phenomena that are of a nature at once to challenge observation and to lead in the direction indicated. Meanwhile, at the very threshold, it becomes evident that due attention has not been yet conferred upon the conjointure—certainly under less exacting conditions—of an arranged series of the photographs of the self-same sitter. Of such composites it is apparent that their superstructure should be constituted of portraits taken at definite and well-separated epochs. The changes which ensue from youth to maturity and from maturity to decadence are clearly amenable to certain physiological limitations. These by this time photography might have definitively elucidated. The "seven ages" of the dramatist display, we may rest assured, various "points in common" which the photographer, as well as the psychologist, might nowadays detect and investigate. That the "boy is father to the man" is admitted. But what a portrait will that be in which the boy, the lover, the soldier, and the justice are conjoined into one harmonious photograph! That will be a "modern instance" worthy of the age!

In the "Galton Composites" it has been noted that in those that are the most successful the final outcome is in some particulars more effective and life-like than are the separate portraits of the members of the group. If the question be here mooted, tentatively, Whence comes this curious and unexpected consequence? it is hoped it may not be deemed waste effort. It should be recognised that the picture assumes in some degree the aspect of being in relief. The appearance might be fitly styled "medalesque." How happens this? In reply, it may be pointed out that in a kindred branch of art—in all such engravings as are designed to assume the appearance of medallion work or *basso-relievo*—the artist adopts a given expedient which is readily appreciable. Along the margins, between the half-tones and the darker outlines of the engraved work, there is always interposed a zone of absolute white representative of the play of light upon the illuminated edges of the design. Similarly, it will always occur that in the case of superposed portraits, and, *a fortiori*, in those in which the outlines are the more perfectly conformable, a broken zone of lighter tinge will skirt the outer shadows just where the "points in common" most manifestly approximate. Here, then, we obtain a glimpse of the conditions under which this effect shall become the most markedly pronounced in its degree. And, in this connexion, it must be regarded as already experimentally ascertained that in the instance of an individual who has reached maturity the typical form of the face will thenceforward be maintained without manifest or appreciable departure.[1] It is clear that under such circumstances the fiducial lines remain in unison, and that there will arise no difficulties in effecting the absolute superimposition of the portraits. Meantime, it may be regarded as inevitable that in the interval between two or more sittings the sitter has become either more plump or more attenuated. Whichever event has happened, the superimposition will be attended with an identical issue. Interposed between the half-tones of the facial areas and the exterior marginal shadows there

[1] In the conjointure of a photograph of Mr. Gladstone of thirty years *ante* with one of the present date this effect is strikingly illustrated. In such case each portrait receives its due modicum of exposure.

will appear narrow belts of lighter tinge, by which the coupled images will be differentiated. From this vantage ground, therefore, we betoken the assured attainment of a novel and artistic result in photographic portraiture. This it is for the ingenious to develop. More to our present purpose is the consideration that medical jurisprudence may find here the adjunct of a new and indubitable test of personal identification. Here, if anywhere, we may catch sight of "that function which science asks of photography, and which medical jurisprudence is entitled to ask of both." Need it be added that this presumed *terra incognita* has been already practically, if but partially, explored, and that it now awaits only that formal annexation to the ever-extending realms of science which, sooner or later, must inevitably take effect.

CHOLERA INTELLIGENCE AT HOME AND ABROAD.

THE story of cholera in Spain is still one of extension, some half-dozen fresh provinces having been added during the past week to those which were previously infected, and the total daily mortality having shown a further tendency to increase. The largest numbers of deaths are recorded from the provinces of Castellon, Saragossa, Teruel, Albacete, and Granada; and the greatest increase has occurred in the city and province of Granada, in each of which the daily average deaths now amount to 160 in number. At Marseilles the disease is also on the increase, although it may be stated that no great bound, such as cholera often takes after a slow and steady increase, has as yet occurred. Panic has, however, set in, and an exodus from the city has already commenced on a large scale. Rumours of further extensions in Northern Italy, in the Basses Pyrenées and at Gibraltar, are floating about. None of them have been substantiated, but they are taken advantage of in order to secure the imposition of many most vexatious quarantine regulations. Thus, Spain, where cholera is killing from 1200 to 1600 persons daily, put Gibraltar in quarantine, and until two days ago stopped communication with the mainland because a single individual in the rock fortress had died of a suspicious form of diarrhœa. France, too, is complaining of the injury done to her port of Marseilles by the strictness of the regulations which have been imposed both by Spain and Gibraltar. As regards the latter place, it is highly probable that the action taken is absolutely necessary to existence. Unless Gibraltar imposes stringent measures of quarantine as regards all places which Spain chooses to regard as suspicious, communication with the mainland is hindered by means of sanitary cordons, and the ordinary means of livelihood are seriously affected. It is the system itself which is vicious, and France is perhaps more responsible for its maintenance than any other country, for it was her representatives who at Rome took the lead in the crusade against replacing quarantine by a reasonable system of inspection and of sanitary administration.

At home rumours of mischief have also commenced, but the only case that has so far justified suspicion was that of the sailor Douglas, who, having been at Marseilles on board a ship which was infected, travelled overland to Bristol, and then died suddenly under circumstances which called for all the vigilant measures which were so expeditiously adopted by Dr. Davies, the medical officer of health to the port and city. No extension of the disease from which the patient died has taken place, for which, if the case was of a choleraic character we have probably to thank the local sanitary administration. But from the first there were circumstances associated with the case which gave grounds for considerable doubt as to the actual nature of the malady.

London, we learn, is making some preparations in case cholera appears in our midst. Last year the Metropolitan Asylums Board arranged with a number of hospitals and institutions to set apart beds for cholera patients should the necessity arise, and from the letter published in the daily press from Sir Sydney Waterlow as to the arrangements which have been made at St. Bartholomew's Hospital, we may infer that the details determined on last year will hold good for the present one, and that a very substantial first line of defence, in so far as isolation is concerned, is in actual readiness. An impetus has also been given to other sanitary questions, and it is evident from answers to questions in Parliament that some temporary measures with respect to the state of the Thames and the Lea are about to be undertaken. It will, however, be imperative that these should be followed by permanent measures, and it is to be hoped that the public will not be put off by anything short of this.

Curious cases of immunity from cholera are again brought under our notice, and especially with reference to the influence of such substances as sulphur and copper in preventing attacks, and it is suggested especially that sulphur by its various compounds may be used as a curative and preventive agent. The statements made last year as to the immunity fron cholera amongst those employed in copper-works was hardly substantiated, but the subject is one of interest, and if any trustworthy data are available as to cholera amongst persons employed in chemical and other allied works they would be of value.

THE VOLUNTEER MEDICAL STAFF CORPS AT ALDERSHOT.

ON Saturday, August 8th, a hundred men and eight officers of this corps proceeded to Aldershot for a week's training with the Medical Staff Corps of the regular army. On arriving at the station the corps was welcomed by the medical officers of the depôt. Hundreds of men of the Medical Staff Corps came to the station to welcome the much-talked-of corps, and altogether a royal reception was accorded. The officers were made honorary members of the medical staff, and the kindness extended by these officers was of the heartiest description, and was thoroughly appreciated. The sergeants of the Medical Staff Corps entertained at their mess the non-commissioned officers of the Volunteer Corps on their arrival.

On Monday the two companies of the corps took part in the field day, and performed their work to the satisfaction of the principal medical officer and the general officers in command.

On Tuesday the corps amalgamated with the Medical Staff Corps, and had a most instructive day in the Long Valley, under the direction of Surgeons Miller and Grier. Seventy-four men were detailed as wounded, and dispersed over a wide area; these, after a careful search, were brought in on stretchers and improvised seats to a waggon or collecting station, and conveyed thence to dressing stations and field hospitals.

On Wednesday the corps paraded on the drill-ground of the Medical Staff Corps, and pitched a bearer company encampment. The work was inspected by Dr. Crawford, the Director-General of the Army Medical Department, together with Surgeon-General Hendley, C.B. Other interesting drills and field-days have been arranged, to enable the corps to fully avail themselves of the advantages obtainable by their visit to Aldershot.

A most instructive time has been afforded, whereby it is hoped that the discipline and physique of the young medical men of the kingdom will be improved. To Surgeon-Major Ray the corps is deeply indebted for the excellent arrangements made.

UNRIPE FRUIT.—The sanitary authorities of New York have recently carried out a raid against the traffic in unripe or overripe fruits sold by vendors in the poorer neighbourhoods of the city. Five tons of the prohibited articles were confiscated. A similar raid carried out in some of the poorer quarters of London might save many a child from an untimely death at the present season, for it is not too much to say that there are at the present moment hundreds of tons of unripe apples and pears exposed for sale in the metropolis.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Whitechapel District.—Mr. Joseph Loane, medical officer of health, comments in his annual report for 1884 on the change in the population which has taken place in this district since 1881. Until recently the poor consisted almost entirely of people from the south of Ireland, but now the greater proportion comprise Russian and Polish Jews. Thus, in 1881, in a population of 71,363 persons, there were no fewer than 9660 foreigners, or 13·5 per cent. The difficulty of dealing with these people, who have but comparatively few of the habits of civilised nations, is obvious. The sanitary condition of the dwellings occupied by the Jewish poor was during the year brought forcibly to the notice of the Whitechapel Board of Works by the Board of Guardians for the Relief of the Jewish Poor, who in a letter addressed to the district board called attention to the fact that the yards at the rear of the houses are seldom if ever sufficiently paved with proper materials, with the result that the "rainfall penetrates into the foundations of the houses, carrying with it the impurities of the yards and open dustbins, rendering the woodwork of the floors rotten, and converting the subsoil into a quagmire of putrid filth." Other points, such as the absence of, or defective condition of, traps, the condition of water-closets without water-supply, the condition of neglected houses, whose "floors, walls, and ceilings reek with the impurities of perhaps half a century of neglect," are dwelt upon. In reply to this communication, a special committee of the district board stated that the letter is a continuous outpour of condemnation and complaint; but the impression left after reading the correspondence which is published in the report is that the staff of two inspectors, who are employed by the district board, is quite insufficient. The total corrected death-rate of the district is 22·2 per 1000, being 1·9 above that of London, and the zymotic death-rate is slightly below that of London, 15 persons having died from small-pox, 45 from scarlet fever, 15 from enteric fever, and 97 from diarrhœa. The deaths of children under one year of age were 17·7 per cent. of the registered births, or 2 per cent. more than in London; the deaths of children under five years of age were 27·2 per cent. of the registered births, or 1 per cent. more than in London. Mr. Loane attributes the specially high death-rate from infantile diarrhœa to infant feeding, but this is probably not the whole reason.

Helmsley District.—During the year 1884 this union was specially exempt from epidemic disease. Scarlet fever appeared at Hawnby, Harome, and Scawton, the disease in the latter case being introduced from a distance; whooping-cough was imported into Beadlam by a child who had come there for a change of air, and who infected a family, causing one death; enteric fever and diphtheria were entirely absent from the district. The district has been carefully inspected by Dr. Bruce Low, with a view to preparation against cholera, and improvements effected where necessary. In one instance it was found that a privy had been erected against a gable wall of a house on the other side of which was a dairy. "The liquid filth from the privy soaked through the gable wall into the dairy, spoiling the milk and other things kept there." Helmsley has a population of 3961, and a birth-rate of 28·52, calculated upon 113 births, of which 18 were illegitimate. The death-rate for the year was 17·8, being somewhat above the average of other country districts; about two-sevenths of the deaths of infants were those of illegitimate children.

Shanklin district.—The report of Dr. Dabbs on the health of this district relates only to the last three-quarters of the year 1884. During this period a careful inspection has been made of many houses in the town, and the necessary steps have been taken for the remedy of defects which were found. There were fifty-eight births and twenty-two deaths occurring in a population of 3000. Of the deaths, seven were among visitors who went there in failing health, and not one was due to any infectious or contagious disease. Dr. Dabbs points out the need for further water-supply and for the better scavenging of the streets.

Hartismere Rural District.—The population of this district is 13,401, the death-rate 16·2, and the birth-rate 31·3 per 1000. Only 11 deaths occurred from the principal zymotic diseases. An epidemic of mild scarlet-fever caused 49 cases and 1 death in 29 houses; among the steps taken for its limitation was the closing of a public elementary school; the outbreak began from the extension of this disease from an adjoining district. Eight outbreaks of diphtheria occurred, causing 16 cases and 1 death. Enteric fever caused 2 deaths. In the majority of cases, both of diphtheria and enteric fever, defective sanitary conditions were found in connexion with each outbreak.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5031 births and 3715 deaths were registered during the week ending the 8th instant. The annual death-rate in these towns, which had steadily increased in the preceding six weeks from 17·6 to 21·1, further rose last week to 21·8. During the first five weeks of the current quarter the death-rate in these towns averaged, however, only 20·0 per 1000, against 21·7, the mean rate in the corresponding periods of the nine years 1876-84. The lowest rates in these towns last week were 13·2 in Wolverhampton, 14·2 in Bolton, and 14·4 in Blackburn. The rates in the other towns ranged upwards to 25·3 in Cardiff, 26·2 in Newcastle-upon-Tyne, 31·2 in Preston, and 32·2 in Leicester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which were but 448 in the third week of June, have since steadily increased, mainly owing to the increase of mortality from infantile diarrhœa, and were last week 930; these included 628 from diarrhœa, 109 from measles, 94 from whooping-cough, 35 from "fever" (principally enteric), 33 from scarlet fever, 26 from diphtheria, and 5 from small-pox. The lowest death-rates from these diseases occurred last week in Bolton and Halifax, and the highest in Salford, Leicester, and Preston. The annual death-rate from diarrhœa last week, which averaged 3·7 per 1000 in the twenty-eight towns, ranged upwards to 4·6 in Sunderland, 5·5 in Leeds, 7·2 in Salford, 10·0 in Leicester, and 11·4 in Preston. The greatest mortality from measles was recorded last week in Newcastle-upon-Tyne and Manchester; from whooping-cough in Cardiff, Derby, and Plymouth; from scarlet fever in Leicester; and from "fever" in Norwich and in Portsmouth. The 26 deaths from diphtheria in the twenty-eight towns included 20 in London and 3 in Liverpool. Small-pox caused 15 deaths in London and its outer ring (excluding 9 recorded in the Metropolitan Asylum Hospital and camp at Darenth), and not one in any of the provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals situated in and around London, which had declined in the preceding nine weeks from 1389 to 614, had further fallen to 518 on Saturday last; the admissions, which had been 118, 72, and 69 in the previous three weeks, further declined last week to 43. The deaths referred to diseases of the respiratory organs in London, which had been 197 180, and 172 in the preceding three weeks, rose again last week to 184, but were 4 below the corrected weekly average. The causes of 85, or 2·3 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bradford, Portsmouth, Brighton, Preston, and in four other smaller towns. The largest proportions of uncertified deaths were registered in Halifax, Sheffield, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 19·7 and 17·6 per 1000 in the preceding two weeks, rose again to 19·8 in the week ending the 8th inst., and but 2·0 below the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 1·7 and 13·3 in Perth and Aberdeen, to 24·5 and 32·5 in Glasgow and Paisley. The 483 deaths in the eight towns included 53 which were referred to diarrhœal diseases, 13 to whooping-cough, 6 to "fever," (typhus, enteric, or simple), 4 to measles, 3 to scarlet fever, 3 to diphtheria, and not one to small-pox; in all 82 deaths resulted from these principal zymotic diseases, against 69 and 64 in the preceding two weeks. These 82 deaths were equal to an annual

rate of 3·4 per 1000, which was 2·0 below the mean rate from the same diseases in the twenty-eight English towns. The deaths referred to diarrhœal diseases in the eight towns, which had steadily increased in the preceding six weeks from 6 to 43, further rose last week to 53, and exceeded the number in the corresponding week of last year by 13; 36 occurred in Glasgow and 6 in Edinburgh. The annual death-rate from this cause in the Scotch towns last week did not, however, exceed 2·2 per 1000, while in the twenty-eight English towns the mean rate was 3·7. The 6 deaths referred to "fever," in the Scotch towns last week showed an increase of 3 upon the low number in the previous week, and included 3 in Glasgow. The fatal cases of whooping-cough which had been 22, 17, and 7 in the preceding two weeks, rose again last week to 13, and included 7 in Glasgow and 3 in Paisley. Three of the 4 deaths from measles, and 2 of the 3 from both scarlet fever and diphtheria occurred in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 82 and 55 in the preceding two weeks, rose again to 62 last week, but were 4 below the number returned in the corresponding week of last year. The causes of 77, or nearly 16 per cent., of the deaths in the eight Scotch towns last week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 19·5 and 23·3 per 1000 in the preceding two weeks, declined again to 19·8 in the week ending the 8th inst. During the first five weeks of the current quarter the death-rate in the city averaged 22·5, the rate during the same period being equal to 20·8 in London and 14·9 in Edinburgh. The 134 deaths in Dublin last week showed a decline of 24 from the number in the previous week, and included 19 referred to the principal zymotic diseases, against 13 in each of the preceding two weeks; 8 resulted from diarrhœa, 4 from scarlet fever, 3 from "fever" (typhus, enteric, or simple), 2 from measles, 2 from whooping-cough, and not one either from small-pox or diphtheria. These 19 deaths were equal to an annual rate of 2·8 per 1000, the rate from the same diseases being 1·9 in Edinburgh and 6·0 in London. The deaths attributed to diarrhœa, which had been 5, 4, and 2 in the preceding three weeks, rose to 8 last week, and exceeded the number in any previous week of this year. The fatal cases of scarlet fever, "fever," measles, and whooping-cough, scarcely differed from the numbers in the previous week. Three inquest cases and 2 deaths from violence were registered; and 47, or more than a third of the total deaths, occurred in public institutions. The deaths both of infants and of elderly persons showed a considerable decline from the numbers in the previous week. The causes of 15, or more than 11 per cent., of the deaths registered during the week were not certified.

Correspondence.

"Audi alteram partem."

THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS AND THE TITLE OF "DOCTOR."

To the Editor of THE LANCET.

SIR,—All who look forward to the appearance of THE LANCET at the end of each week with the same satisfaction that I do, will feel an additional thrill of pleasure whenever they recognise among the contributions the sparkling style and forcible reasoning of Dr. Moxon. It would be too much to say, however, that he always succeeds in enforcing conviction; for, notwithstanding the clearness of his reasoning and the perspicuity of his style, he sometimes bases his arguments on premises that, to say the best of them, are extremely shaky. I had intended to offer in last week's issue of THE LANCET a brief criticism of Dr. Moxon's paper, but the time was allowed to slip by until it was too late, and I had a hope also that someone better fitted for the task would have come forward to expose the fallaciousness of his arguments.

In the first place, I object very strongly to Dr. Moxon's assumption that society is governed by principles, unless, indeed, you can say that the resultant of a number of conflicting interests, which to some extent counterbalance each other, amounts to a government by principles. The fact is, there is no such thing in the social economy as a levelling up. The whole tendency of society is to level down, and in the struggle for existence it is only the strong and vigorous who can keep themselves from being "levelled" altogether out of recognition. The great iron roller passes over all. Some it crushes into utter extinction; others it maims and mangles, and these pass away along the lanes and by-ways of life, until they find a happy termination of their misery in the everlasting silence of the grave. A few rise up again, and after shaking themselves free of the mud and dust that cling to them, they take a long breath, and, finding themselves unhurt, bid defiance for ever after to the blind tyranny of society, and end, perhaps, by having the dust licked off their shoes by the very monster that formerly wished to devour them. I object still more strongly to the assertion that the blind impulses of society have any foundation in equity. They are too often the outcome of feelings the very reverse of equitable, and wear the aspect of tyranny rather than of justice. A man will get as much justice out of the world as he enforces and no more. This is an age of "Stand and deliver," and the flower that is content to "blush unseen" will still, as of yore, "waste its fragrance on the desert air."

The proposal to make the Associated Colleges of Physicians and Surgeons a medical university, would be, to borrow Dr. Moxon's phrase, nothing but a levelling down. Instead of raising the diplomas of these colleges to a higher position than they now hold, it would have the result of deteriorating the value of medical degrees altogether. If, moreover, the privilege of granting degrees were given to the London Colleges, how could it in justice be withheld from those of Edinburgh, or, indeed, from any other similar institution in the kingdom? It is too much the custom of the London Colleges to look with lofty disdain on their northern sisters; but that the examinations of the latter can compare favourably with those of the former, many a member of the London College of Surgeons can testify, who, after having passed his meagre examination in London, has gone up to the College of Physicians in Edinburgh, and, even after months of study, has either passed "by the skin of his teeth" or failed altogether, and ultimately solaced himself with that resource of the unfortunate, the licence of the Society of Apothecaries.

A university is an institution not merely for granting professional diplomas, but for stamping with the mark of a liberal education all those to whom it grants its degrees, either professional or otherwise. Has the College of Physicians or the College of Surgeons ever aspired to do this? Their preliminary examinations go no further than the minimum required by the Medical Council, and their examinations in science, when existing at all, fall very far short of those required by any university in the kingdom. A university granting only medical degrees would be an anomaly sufficiently striking to provoke the wonder of all Europe, and would neither command the respect nor meet the wants of the medical profession. The medical students of the South of England ask for bread, and Dr. Moxon would give them a stone. I am convinced they will not accept a gift of such an equivocal character. The present University of London is the body, of all others, to which we must look for the renovation of the medical schools of London; and, if the proposed changes in its constitution can be carried out, there will be nothing further to complain of. If they cannot, then let a new teaching university be established, embracing all the faculties—a university, not in name only, but in reality, and one which would meet with the support not only of the medical profession, but of all those who wish for themselves or for their sons a sound and liberal education, followed, if necessary, by an honourable and genuine professional title. The present University of London would then retain its high function of granting degrees to all those who were willing to submit to its stringent regulations, and who could pass its very impartial examinations.

I am, Sir, your obedient servant,

Birmingham. WILLIAM J. NOTLEY, M.D.

To the Editor of THE LANCET.

SIR,—Will you kindly give me space to add my protest to those of others that have appeared in your columns against the action of the Royal Colleges of Physicians and Surgeons in the matter of the title of "Doctor."

There has been no little misconception as to what the

Colleges intended; some supposing that they wished to legalise the title of "Doctor" without giving the M.D. degree; some that they wished to obtain the power to constitute themselves a university possessing only one faculty; others that it was their intention to constitute themselves a commission for acquiring and dispensing the privilege now possessed by the Archbishop of Canterbury, of granting degrees; but it is now evident by the report recently presented to the Comitia of the Royal College of Physicians that the object the committees of the two Colleges have in view is simply to obtain the power of granting degrees in medicine and surgery.

I do not wish to see the medical schools of London injured, because I believe that the metropolis is the best centre for medical education in the world, and I believe that our students are better educated and pass as searching examinations as many of those held at some of the universities; but the injustice to our students is, not that they are debarred a medical degree, but that others in no way their superiors can obtain one so easily. My only objection is to the way it is proposed to remedy the injustice. There are other interests involved. The public ought to have some means of distinguishing the more highly educated men. It still believes it has this means in recognising the holders of the M.D. degree. To a great extent the public is deceived, for of late years the universities have not restricted their degrees to the better educated men, but have distributed them almost wholesale. I object to aggravating this evil and increasing this imposition on the public. I would rather try to mitigate it, and restore to the public some means of distinguishing the more highly educated practitioners. This, I take it, was the spirit which prompted the provision of the Medical Act of 1858, which Act, besides enabling the public "to distinguish the qualified from the unqualified," insured by its penal clauses concerning the assumption of false titles that the public should have some means of distinguishing the better educated from the average man.

The Medical Bill proposed by the late Government (as at first introduced) was calculated to insure this protection to the public, which the Act of 1858 had failed to secure, and by advocating and supporting such a measure in Parliament, so that it might become law, would, in my opinion, be the only honourable means by which the injustice at present suffered by the medical students of London could be removed. The proposed Bill was so modified and readjusted to suit foreign graduates, Scotch corporations, and others whose position it menaced, that the original supporters of the measure ceased to take any interest in it in its thus mutilated form, and it ultimately succumbed to the opposition of the Scotch licensing and degree-conferring bodies. Nothing lowers the profession in the social scale more than the assumption of false titles. By the proposed Bill a minimum qualifying examination was to have been established in each division of the kingdom, having, as nearly as possible, a uniform standard. Every medical man would have had to pass it, and there would have been no bar then to his proceeding at once to practise his profession. The degrees of the universities in Scotland and Ireland, as well as in this country, would have been reserved for those who cared to expend more time and money and study in their acquisition, and they would have attained a corresponding value. It would have rested with the General Medical Council to decide whether any university was allowing the requirements and examinations for its degrees to sink below the proper and established standard.

This mode of removing the injustice under which London medical students labour is the only one, I think, that can commend itself to the acceptance of the great body of the profession. But there is no enthusiasm in the medical profession, except in those questions which involve immediate self-interest, and it is no one's business to get up a counter-petition to the one mentioned by the committee appointed by the Royal College of Physicians to consider the question of the title of "Doctor," as emanating from 600 teachers, practitioners, and students of medicine, and no attention is paid to the opinon of those who were asked to sign the petition, and who refused. The London medical schools are being damaged, and the quickest way to stop it is to do what we have been complaining for the last twenty years of the Scotch and Irish universities doing—that is, swamping the profession with the holders of medical degrees. All idea of being guided by principle in legislation, both in medical and in the broader field of politics, seems to be sacrificed to expediency. It suits the candidates for parliamentary representation to pose as the givers of votes to improvident persons who at times have to seek medical relief at the expense of the rates; and it suits the teachers of the medical schools to offer as a bait for students the universal acquisition of the M.D. degree, which, in England at least, has for centuries been held in honour.

It does seem extraordinary that the Royal College of Physicians of London, which up to the present has been noted for the respect and deference it has paid to university degrees, and for its general action in maintaining the dignity and reputation of the profession, should be foremost in lending the influence of its name to such a scheme as the one now under consideration.

Nor is it possible to have two universities in London such as are advocated by those who support a scheme for what they have called "a teaching university for London." There might with advantage be some modification of the regulations at present existing in the London University, in the direction already indicated by the action of the Senate, in allowing rejected candidates earlier opportunities for again presenting themselves for examination; and perhaps also in allowing the formation of Boards of Studies to be under the direction of the Senate. But anything which would lower the character or value of the M.D. degree at present granted by the University of London ought to be strenuously opposed; and I would commend to the notice of all the resolution passed, almost unanimously, at the last meeting but one of the London Convocation, to the effect "That this House desires to express its approval of the resolve of the Senate, as intimated by the Vice-Chancellor, to maintain the standard and scientific character of the medical degrees of this university." The universities of Oxford and London, in the face of a well-organised and persistent endeavour to degrade all medical titles, have for many years past been foremost in maintaining and supporting the dignity and reputation of university medical degrees.

Should the advocates for the popularising of the title of "Doctor" succeed, or the Royal Colleges persist in endeavouring to obtain, and succeed in obtaining, the privilege of granting the degree of "Doctor" to every medical man, some other title would have to be found to distinguish the more highly qualified practitioners, which would again be coveted by those who did not possess it; and then in a few years the same agitation would be repeated, with the same result.

I am, Sir, yours faithfully,

W. E. STEAVENSON, M.D. Cantab.

Welbeck-street, Aug. 3rd, 1885.

THE PAPER OF THE PASS EXAMINATION OF THE ROYAL COLLEGE OF SURGEONS.

To the Editor of THE LANCET.

SIR,—The first two questions in the recent paper (July 21st) are as follows:—

"Describe the operation you would perform for excision of the wrist-joint. Enumerate in order the parts that would be divided or displaced in the operation.

"Describe the deep cervical fascia, more especially in reference to the course of deep-seated suppuration."

These two questions were intended to test the knowledge of the candidates in surgical anatomy. Each candidate must answer one of them to avoid being disqualified on his paper.

In my capacity as demonstrator of practical surgery at St. Bartholomew's Hospital, I frequently receive letters from the parents (especially medical men) whose sons have been rejected at the pass examinations, asking whether I do not think that too much is expected from young men who are only attempting to obtain a qualification to practise. I am usually able to reply that the examination is, in my opinion, very fairly conducted, and that the questions are not more difficult than they are expected to be. I have, of course, my own opinion of such questions as: "Mention the several structures which must be divided in removal of one half of the inferior maxilla" (July, 4th, 1884); and think that, when only two questions are asked, it would be decidedly better to set simpler questions relating to larger and more important surgical anatomy; but I should not deem it necessary to trouble you with a complaint against them.

My objection to the first question in the present paper is that it is not a fair question in surgical anatomy; that it requires a description of a complicated operation which is

rarely performed; and that it leads men to waste their time and strength in studying matters which are never likely to be of value to them. One of the examiners told me that all those men whose papers he had read had answered the question on excision of the wrist-joint, and that many of them had answered it well. I could only reply that I was sorry to hear it, for I was sure they might have employed their time much better than in learning the operation. To my certain knowledge, many of the candidates did not attempt to answer it, because they felt that they did not know the steps of the operation, and could not therefore judge rightly what structures would be divided or displaced. The only opportunity which they had of showing on paper their knowledge of surgical anatomy was to describe the deep cervical fascia, and I can conceive that a student may be very fairly learned in surgical anatomy and yet be unable to answer that one question in anatomy to the satisfaction of the examiners. In order to discover how often excision of the wrist has been performed at my own hospital during the last five years, I consulted our statistical tables from 1880 to 1884, inclusive, and found that the total number was five times, on an average once a year. The cases in which it is possible to perform it with benefit are very few, and opinion is divided as to its utility.

I should not, Sir, venture to ask you to publish this protest were this the solitary instance in which the paper for the Pass Examination appeared to many of us unsuited to the requirements of the examination. Nor should I appeal to the medical public if I had not already done so to the Council. But, in truth, I wrote a letter to the Council of the College rather more than two years ago, drawing attention to the first anatomical question in the paper for May, 1883: "Describe the operation for removal of the scapula. Mention the origins and insertions of the muscles in their order, and the vessels and nerves that must be divided." I begged at that time that students should not be asked to describe very rare operations. With what success the present paper proves.—I remain, Sir, yours truly,

August, 1885. HENRY T. BUTLIN.

STATUS OF THE MEDICAL OFFICER OF HEALTH.

To the Editor of THE LANCET.

SIR,—The editorial article in the issue of August 1st upon this subject is, without doubt, an expression of what extensively prevails in the country, both in large sanitary districts, of which most is heard, and in small sanitary districts, of which no mention is made. This policy of reducing the salaries of medical officers of health must inevitably be attended by serious consequences. To the individuals who have given so many years of their lives to sanitary work it appears unjust and a hard lot that they should have to accept the reverse of fortune in a diminished income, or the alternative of a new start in life, for no fault of their own; to the community, that as the salaries attached to these appointments cannot command the services of efficient officers or of men of experience, sanitary administration, and especially the public health, must suffer.

It is hardly to be supposed that this policy of sanitary authorities is a casual one, or that it has been reduced to definition further than that persons are to be got to "do the work" for less salaries than the appointments now carry. But there is reason for this policy, and it lies in the activity, efficiency, and successful work of the officers whose salaries are attacked. Medical officers of health have been educators of sanitary authorities and of the public in sanitary requirements for the maintenance of health. With this knowledge which has been spread, and the work which has been done, sanitary authorities doubtless feel that their "houses are set in order," and that this "order" can be maintained by their own directions and the assistance of less highly salaried officers. Sanitary activity and work have hitherto meant expense both to individual property owners and to the public purse for works for sewering and water-supply; in other words, private costs and increased rates. It is not unnatural, perhaps, that the representatives of the people should catch at such a means of reducing the burdens of taxation. On the other hand, this policy may be viewed as a narrow and a shortsighted one, and as one based upon a misconception of the capabilities and the character of the work in which the officer of health should engage in seeking to limit the incidence of diseases. It is not alone that he should conduct sanitary inspections as a kind of superior officer and direct the performance of preventive measures. Such work is inseparable from the duties of the office, and has hitherto constituted about the limit of responsibilities. Modern researches into the etiologies of infectious diseases, and of other diseases not classified as zymotic, have subverted preconceived ideas of what these diseases are, and have opened out a wide field both of knowledge and of investigation into the principles of origin, transmission, growth, and reproduction. The discovery of micro-organisms in diseases displays a continually widening circle, in which their natural histories are being made more certain. Yet in regarding bacterial life in its varied forms as the infecting principle, much has to be learnt of the conditions under which they live, assume activity, and perhaps also assume changes in their functions. In conducting inquiries into the occurrence of infectious diseases, epidemics, and indeed other diseases of a specific nature—such as phthisis, pneumonia, rheumatism, &c.—the medical officer of health should use experimental methods in his laboratory, by which a knowledge of causation and the sequence of different epidemic diseases would be better established. In such manner does the sphere which embraces the duties of the medical officer of health also constantly widen, and new and most essential works present themselves, the conduct of which cannot but be to the wellbeing of the community. Sanitary authorities should thus understand that the work of the medical officer of health has by no means come to an end with the era of sanitary improvements, but that his work is just commencing in the life histories of preventable diseases.

It is to the Local Government Board that one must look to give direction to such work, as well as to give sufficient material, by the union of sanitary districts into areas of suitable size to give scope to proceedings, and to secure the tenure of office to those who devote themselves to this special work.

Some sympathy may be felt for the ratepayer for the increased rates sanitation has called upon him to pay. Even for this there is an apparent remedy. With the combination of sanitary districts, there are some parallel offices which might, and should, be united to that of the medical officer of health, to do away with anomalies and to turn them to the best advantage. They are those of (1) the superintendent registrar of births and deaths, (2) the certifying factory surgeon, and (3) the coroner. The superintendent registrars conduct the censuses, transmit the subdistrict registrars' returns to the Registrar-General, furnish copies, and receive handsome remuneration. They make no statistical use of what passes through their hands, nor do they even give any indication of the condition of the public health. Sanitary authorities *have to pay* for copies of these returns, to be made statistical use of by the medical officer of health. The Public Health Act places certain workshops and factories under the supervision of the medical officer of health; others are under the certifying factory surgeon. Thus these two officials' operations tend to the same end. And, lastly, in cases of railway or mining accidents, and in cases of murder, the coroner's court conducts the same inquiry that the Board of Trade or the magistrate's court conducts. Thus there are duplicate inquiries into these causes of death; of others less important, a personal investigation, as by the Scotch Procurator Fiscal, would meet all ends; which inquiries might also, with advantage, be extended into all cases of uncertified death.

Thus, Sir, while recognising in a measure the policy of sanitary authorities, it is hoped that what has been said may throw some light on it to show that it is untenable; and also that some indication has been given in what way the public health service may be increased in usefulness, and that by the combination of certain parallel offices, together with the union of sanitary districts, greater efficiency may result and a saving in salaries accrue to the public purse.

I am, Sir, yours truly,

Denbigh, Aug. 4th, 1885. J. LLOYD-ROBERTS.

MEDICAL BENEVOLENT FUND.

To the Editor of THE LANCET.

SIR,—The following case has come under my notice as Treasurer of the British Medical Benevolent Fund within the last week:—

"A medical man in practice in Australia lost his life

through an accident. His widow and two daughters came to England expecting to find friends, but these were on the point of returning to Australia. Being without advisers here, they were robbed of nearly all they had by a fraudulent trustee, and have had to strive for a maintenance by letting their house out in apartments and by teaching. The mother, however, has been suffering for eighteen months from gastric ulcer, and requires the constant attendance of one of the daughters, so that one only can go out to teach, and their resources have consequently run down to the point of exhaustion. A grant of £20 has been made from the Fund, the maximum which can be allowed for any single case, £10 of which has been given at once, while the remainder is to be paid in monthly instalments. But this just falls short of what is required to give these poor ladies another chance. Twenty or thirty pounds more would redeem a valuable pianoforte, which would enable the girl kept at home in attendance on her mother to earn something by giving music lessons, and this would probably suffice to maintain them.

Under such circumstances I have felt justified in departing from my rule of not asking for aid for individual cases, and in placing the facts before the profession. I shall be happy to take charge of anything which may be sent for these ladies. At the same time I trust that the Fund will not suffer, relieving as it does more than 150 deserving and urgent cases yearly, besides giving over fifty annuities to aged members of the profession.

I am, Sir, your obedient servant,

W. H. BROADBENT.

34, Seymour-street, Portman-square, W., July 31st, 1885.

CHILD-BED MORTALIY IN LONDON MATERNITY HOSPITALS.

To the Editor of THE LANCET.

SIR,—Under this heading Dr. Duncan writes in THE LANCET of Aug. 1st, calling in question the accuracy of Dr. Priestley's statement, made upon my authority at the last meeting of the Obstetrical Society, that the mortality at Queen Charlotte's Hospital between the dates of Feb. 14th, 1884, and July 1st, 1885, was only 1 in 1100 consecutive cases. He indirectly assigns as a reason for doubting my assertion the great divergency there is between the mortality under Drs. Williams and Champneys at a similar institution and that at Queen Charlotte's. To be logical, Dr. Duncan should doubt Drs. Williams and Champneys' statements, as there are many maternities which show a higher death-rate than theirs—indeed the majority of maternities do. I never knew before that the greater mortality at Vienna than London was an argument against the correctness of the Registrar-General's annual reports.

I beg to refer both Dr. Duncan and Dr. Williams to Mr. Wynter Blyth for an explanation of his most excellent quarterly reports. My object in naming the latter gentleman is, if I am correctly informed, that he quoted from these reports in order to refute Dr. Priestley at the above meeting. Did it never occur to either of these gentlemen that there are infants in a lying-in hospital, and that some might accidentally happen to be females, and that death is not a respecter of sexes? In conclusion, did it not strike Dr. Duncan that the reason I was so careful in giving the dates between which the 1100 cases were delivered was that there might have been some deaths antecedent to Feb. 14th, 1884, in that year? and also that Queen Charlotte's Lying-in Hospital is a public institution, with public records open at all times to the inspection of any governor of the hospital? Am I demanding too great an effort on Dr. Duncan's part when I ask why he did not ask some governor then (by his own statement he had the list before him) to call and request the secretary to show the death certificate book, or why he did not constitute himself a governor by a three guinea subscription, before recklessly rushing into print and impugning the veracity of a member of the hospital staff?

I am informed that even Dr. Braxton Hicks has not escaped having the results of his private practice called in question. I am proud to find myself in such good company, and only regret that his figures are more difficult of proof than mine, which half an hour's inspection of the death register at the registrar's office next door but one to Queen Charlotte's Hospital can verify, and show how recklessly Dr. Duncan has endeavoured to cast a doubt upon the statements made by Dr. Priestley at the aforesaid meeting of the Obstetrical Society, on the authority of yours truly,

W. C. GRIGG, M.D.,
Physician to Queen Charlotte's Hospital.

Curzon-street, Mayfair, August 11th, 1885.

ENGLISH ARRANGEMENTS FOR THE RECEPTION OF CHOLERA.

To the Editor of THE LANCET.

SIR,—May I be permitted to draw attention to an important gap in our lines of defence against this probable invader?

Our first line is *exclusion* from our shore of developed and suspicious cases. This is liable to be penetrated at many points. Our second is the *special management* of the cases which have pierced our first line. Upon the effectiveness of this special nursing our protection from the spread of the disease mainly rests. Once this is thoroughly broken, the disease runs unrestrained.

Whence can we obtain nurses properly instructed on the points specially necessary? On the arrival of casual cases at hotels or at home where are the instructions to guide the public upon these points? I am informed that we cannot rely on obtaining much, if any, supply for cholera cases from the so-called nursing institutions. Very few of these nurses for ordinary cases know the special measures requisite for annihilating this contagium. The hospitals of the Asylums Board and the vestries and unions will soon absorb all the better class of nurses. We have no properly skilled nurses ready and waiting for the first arrivals; yet this is the key of the situation. Moreover, we have few, if any, for those secondary cases who will not or cannot be removed to hospitals, nor for cases before removal. The proper attention to the needs of the affected is one thing, but the prevention of extension, viewed broadly, is a more important matter. To meet this may I throw out a suggestion, as a beginning, that nurses specially instructed should be brought together in depôts or centres, under proper supervision, to which medical men and others could send; that the direction of these centres should be made widely known in each district; that, in view of a heavy demand, volunteers might be attached to these, living in the district and ready at short notice; and that one or two special nurses should be in residence at all the large terminal hotels and at others frequented by travellers. Printed rules as to treatment of the discharges of confirmed and suspicious cases also should be widely circulated among the public.

The importance of this subject must be my apology for occupying so much space. I am, Sir, yours truly,

J. BRAXTON HICKS.

George-street, Hanover-square, August 1885.

THE COMPARATIVE DANGER OF VARIOUS ANÆSTHETICS.

To the Editor of THE LANCET.

SIR,—On page 1147 of THE LANCET for June 30th, a correspondent is disposed to depreciate statistics going to show that the deaths from chloroform are far more numerous than those from ether, and seems to defy anyone to produce such statistics. Dr. Andrews of Chicago, in the *Medical Examiner* of that city for May, 1870, collected 92,815 cases of etherisation, with 4 deaths (1 in 23,204); 117,078 chloroform, with 43 deaths (1 in 2723); chloroform and ether mixed, 11,172 cases, with 2 deaths (1 in 5588); and 7000 of methylene, with 1 death (1 in 7000). Dr. Coles of Virginia has collected 152,620 cases of chloroform inhalation, with 53 deaths, or 1 in 2873; and 10,000 of methylene bichloride, with 2 deaths, or one in 5000. Your English expert, Dr. B. W. Richardson, gave a high rate of mortality to chloroform. In eight hospitals (Norwich, Lynn, Stafford, Wolverhampton, Newcastle-under-Lyme, Brighton, Birmingham—General and Queen's Hospitals), from 1848 to 1864, it was administered in 17,000 cases, with 1 death only; while from 1865 to 1869 there were 7500 cases and 6 deaths! In six other hospitals (Lincoln, Bath, Cambridge, Oxford, Reading, and Nottingham) the same periods show respectively 17,900 cases, with 3 deaths, and 2765 cases, with 1 death—being a total of

35,165, with 11 deaths, or 1 in 3197. Chisholm quotes Kersaying that in the first twenty-eight years of its use at the Royal Infirmary at Edinburgh chloroform was responsible for only 2 deaths; and during the first ten years of this period he estimates the cases as 36,500, with 1 death only. Elser of Strasburg gives us statistics embracing 16,000 cases of chloroformisation, with no death at all. Dr. Kidd of London saw it used 10,000 times, with no fatal cases; and Richardson himself saw it used in the same city 15,000 times before he met with his first fatal result. Clover records 3000, and no death; and Billroth 12,500 before his first death. Hunter McGuire, of Richmond, Va., reports 18,000 cases, and no death, during the late Rebellion. Chisholm used chloroform 6000 times, with no death, and estimates its mortality at $\frac{1}{7000}$. During the Crimean war the French used chloroform 30,000 times, with at least 2 deaths.[1] In the English army, out of 12,000 cases, McLeod heard of 1 fatal case.[2] During the Rebellion, 1861-65, it was estimated that chloroform was used 80,000 times, of which 7 cases are known to have proved fatal;[3] this would be 1 in 11,448. Nussbaum[4] had 15,000 cases and Kœnig about 7000, all without accident; while Kappeler himself had 1 death in 5000 cases. Bardeleben[5] had seen more than 30,000 cases of chloroform inhalation before the year 1876, with no death; but during that year there were 4 fatal cases out of only 1200! This gave, up to 1879, a mortality of 4 in about 84,000 cases. In St. Bartholomew's, in 1875-80,[6] chloroform was used 4810 times with 2 deaths, or 1 to 2405; and ether was used 6440 times, with 2 deaths, or 1 to 3220. Summing up, we have—Ether, 99,255 times, 6 deaths = $\frac{1}{16542}$; chloroform, 492,235 times, 84 deaths = $\frac{1}{5860}$.

I am, Sir, yours truly,

NELSON B. DE SIZER, M.D. & Bac. Sc.

Brooklyn, New York, Aug., 1885. (Neo-Eboracensis).

DYING DECLARATIONS.

To the Editor of THE LANCET.

SIR,—In the Notes of Cases in Obstetric Jurisprudence of August 8th, Case 12, page 244, Dr. Braxton Hicks writes as follows: "In cases where the only evidence is derived from one who is dead it is impossible to convict unless the dying statements are taken by a magistrate." I would point out that this is a very prevalent mistake, and one calculated often to cause a serious failure of justice. It cannot be too clearly known, especially to medical men, that, provided the declarant conscientiously believes that he has no hope of recovery, *anyone* may take down his dying declaration, and such declaration properly attested is admissible as evidence just as much as if taken on oath by a magistrate.

I am, Sir, yours truly,

CHAS. GROSS, F.R.C.S. Eng.

St. Saviour's Infirmary, Walworth, S.E., Aug. 8th, 1885.

THE WATERS OF TARASP.

To the Editor of THE LANCET.

SIR,—In your issue of the 1st inst. is a notice of the baths of Tarasp (Unter Engadine), to which, with your permission, I will add that the principal hotel of the locality is situated in a deep valley on a level with the river Tun, and therefore in a somewhat close and confined situation. Visitors should ask about Schuls, a village near Tarasp-Bad, but on much higher ground, where there is first-rate hotel accommodation, and to which the physicians of the baths, Dr. Rillias and Dr. Pernisch, pay daily visits. There are also large baths maintained by the authorities of the district and the chief chalybeate springs. For beautiful scenery and an extensive view this place is unrivalled.

Your contributor speaks also of Carlsbad as hot and stuffy, but I have not found it so even in July, and the guide-books speak of it as "a great-coat place," for the mornings and evenings are very cool. The town lies in the valley of the Tepel, near its confluence with the Egen, but I have never found it unbearable, whilst its physicians, though they admit some amount of bad drainage, tell you "visitors never die here," and, in fact, they very rarely do so. Justice is, we all know, the first object of your paper, so I beg an insertion of these few lines.

I am, Sir, yours obediently,

Mandeville-place, W., August 6th, 1885. FREDERICK SIMMS.

[1] Medical Times and Gazette, May 7th, 1859, p. 485.
[2] Ibid., July 10th, 1858, p. 49. [3] Circular, No. 6, p. 87.
[4] Kappeler, Anæsthetica, p. 124.
[5] Medical Times and Gazette, Aug. 2nd, 1879.
[6] British Medical Journal, Jan. 15th, 1881, p. 103.

LIVERPOOL.

(From our own Correspondent.)

PRECAUTIONS AGAINST CHOLERA.

THE communication between this city and Spain would of itself be sufficient to justify the adoption of every precaution in order to prevent the possibility of any spread of cholera. In addition to this there is now the danger of the disease being imported from Marseilles. It is only bare justice to our local authorities to say that owing to their efforts last year Liverpool was, humanly speaking, saved from an epidemic of cholera, several cases of that disease having undoubtedly occurred on board vessels between Marseilles and this port; but owing to the timely destruction of all infected clothing and bedding, and the thorough disinfection of the vessels, further progress was arrested. Dr. Stopford Taylor, the medical officer of health, is also port sanitary officer, and is most ably seconded by Dr. Hope, assistant medical officer of health to the city and port, and a competent staff of sanitary officials. Liverpool still contains many streets, spread over its whole extent, in which the inhabitants are thickly clustered together, living in a half-starved, drunken, and dirty state, where cholera, if it once appeared, would commit frightful ravages. It is therefore satisfactory to learn that every precaution is being adopted, and especially to prohibit the landing of rags from any Spanish port. Should any vessel arrive from an infected port she will be thoroughly examined by the medical and sanitary officials, and not allowed *pratique* until the former are satisfied that there are no traces of contagion on board.

THE SCARCITY OF WATER.

Notwithstanding recent heavy showers much anxiety prevails as to the scarcity of water, though the supply is cut off for the twelve hours five p.m. to five a.m. At the weekly meeting of the Water Committee on the 10th inst. it was stated that from the statistics of the supply of water made up to the 4th inst., there was a deficiency of 1239 million gallons for the present year.

THE ASSIZES.—CASES OF MEDICO-LEGAL INTEREST.

An elderly man was convicted of attempting to murder several of his children at St. Helens by administering to them oxalic acid. Under prompt medical treatment they all recovered. Mr. Frank T. Paul, lecturer on forensic medicine and toxicology at the Liverpool University College, found oxalic acid in the vomited matters. The case was clearly proved, and the prisoner was sentenced to twenty years' penal servitude.

A German sailor, twenty-two years of age, was charged with having murdered the second mate of the British barque *Paragon* while on a voyage from Buenos Ayres to Valparaiso. The crime was committed with an axe, on which Mr. Paul found blood-marks. A severe wound was inflicted on the back of the deceased's head, to which he succumbed twelve days after. The jury found the prisoner guilty of manslaughter, and he was sentenced to ten years' penal servitude. There were also several cases of rape and indecent assault on females, in all of which Mr. Justice Manisty inflicted very severe sentences, remarking that these crimes were very common both in this and other counties.

EDINBURGH.

(From our own Correspondent.)

MR. ERICHSEN'S CANDIDATURE.

MR. ERICHSEN'S committee are working energetically in favour of his return as member for the Edinburgh and St. Andrews Universities. They are carrying out as active a programme of personal canvass as the usages of academic etiquette will permit. A printed letter has been forwarded

to each member of the general councils of the Universities who constitute the electorate, signed by the chairman and secretaries of the committee, pointing out Mr. Erichsen's special qualifications, on professional and general grounds, for the post for which he has become a candidate. This letter is accompanied by Mr. Erichsen's answer to the requisition sent him by a large number of the constituents, and a reprint of his address to the electors delivered last month in Edinburgh. A list of gentlemen who have intimated their intention of supporting Mr. Erichsen is appended to the letter; and it gives evidence of the fact, that although his medical supporters outnumber those of other professions, there will still be very substantial support forthcoming from the latter, and specially from those connected with or interested in educational matters.

PARIS.

(From our Paris Correspondent.)

THE SANITARY CONDITION OF MARSEILLES.

MATTERS must really be in a very bad way at Marseilles when the inhabitants themselves are crying out against the filthy condition of their city and against the indifference of the Municipal Council to their almost incessant appeals to carry out the necessary sanitary improvements, not only with the view of warding off the cholera, but also to render the place habitable, even under ordinary circumstances; but at the same time it would be well if the residents began by cleansing their own habitations. Accounts that reach Paris corroborate in all respects the very interesting reports of the Special Sanitary Commissioners of THE LANCET, and it has been stated that notwithstanding the large sums that have been voted merely to clear out the enormous amount of filth that is accumulated in and about the city, yet nothing whatever has been done to remove the nuisance complained of. All that the municipal councillors seem to be occupied with is, not how the cholera should be kept away, but to disabuse the public mind, and particularly that of foreigners, of the fact that the cholera is already in their midst. An official telegram was forwarded to this effect on the 8th inst. to the Minister of Commerce, in which it was stated that the deaths daily reported from cholera occur, not from the true Asiatic, but from the sporadic form of the disease. According to the municipal report of the 10th inst. the number of deaths from all causes was seventy-seven, of which thirty-five were from cholera.

THE HEALTH OF TOULON AND PARIS.

The health of Toulon is reported to be as yet satisfactory, for since the admission on the 8th inst. into the maritime hospital of a suspicious case of cholera no other has occurred in that town. Paris may be considered just now to be in a very healthy state, the mortality from all diseases for last week having been 952, as against 964 for the preceding week. The two principal causes of death were typhoid fever and infantile diarrhœa, but there is no epidemic reigning in the city at present.

THE EXAMINATION OF MEAT.

The Municipal Council of Paris has voted funds for the establishment of a histological laboratory at the central market for the inspection of meat sold there, and for the determination of the nature of certain maladies detected in animals killed for food.

RECONSTRUCTION OF THE PARIS MATERNITY.

The Administration of Public Assistance has set aside the sum of 2,000,000 francs for the partial reconstruction of the Paris Maternity, which is much needed, as it is a very old building, and requires to be fitted up with all the modern improvements. It contains 416 beds, of which 322 are for patients and 94 for female pupils, besides 80 cradles for infants. Women are received here in their last month of pregnancy, but in case of urgency they may be admitted in their eighth month on promising to take charge of their offspring. They are attended in their confinement by qualified midwives attached to the institution, or, if need be, by the surgeons of the hospital. The Paris Maison d'Accouchement or Maternity is a school and hospital from which are recruited most of the *sages femmes* that practise in France There are no male pupils, but there are two surgeons and one physician attached to it. Strangers are not allowed to visit the hospital.

REWARD TO DR. MAILLOT.

On the proposition of Professor Verneuil, a national "recompense" has been voted at the Chamber of Deputies in favour of Dr. Maillot, a well-known army surgeon, who is said to have been the first to popularise the use of the sulphate of quinine for pernicious fevers. He was for many years chief of the medical staff in Algiers, and although it is some time since he retired, it is only now that the French Government has thought of rewarding him for his valuable services. He is now eighty-one years of age.

Paris, August 11th.

MEDICAL NOTES IN PARLIAMENT.

Dr. E. Klein.

IN the House of Commons on the 7th inst., Sir R. Cross, in reply to a question by Mr. Firth, stated that he believed the Dr. E. Klein whose name appeared in the last annual return (for the first time) as a licensee and holder of a certificate, under the Cruelty to Animals Act, 1876, for experiments on living animals without anæsthetics, to be the person of that name who was examined before the Royal Commission of 1875, and who then stated (questions 3539, 3541, 3544) that he had no regard at all to the sufferings of animals when performing experiments without anæsthetics.

The Purification of the Thames.

On the 10th inst., in reply to Mr. C. Read, Sir R. Cross stated that he had some time ago laid before the Metropolitan Board the memorial of Colonel Jones, V.C., and Mr. Bailey Denton, proposing the cleansing of the metropolitan sewage on Canvey Island, in consonance with the views of the Royal Commission on Metropolitan Sewage Discharge—viz., "That it is neither necessary nor justifiable to discharge the sewage of the metropolis in its crude state into any part of the estuary of the Thames from the Nore upwards," and that "the sewage liquid, after separation from the solids," should be carried down to a point of the Thames lower than Hole Haven.

In answer to Mr. Borlase, Mr. A. J. Balfour stated that the Government had been in communication with the Metropolitan Board of Works, and were informed that the experiments as to the purification of the sewage discharged into the Thames at Crossness have been in progress for some months upon 1,000,000 gallons per day, and that the experiments, as far as they have gone, are considered by the officials of the Metropolitan Board of Works to have been sufficiently satisfactory to justify the Board in preparing machinery and plant for treating chemically and by precipitation 8,000,000 gallons of sewage daily. He added that the Local Government Board have no jurisdiction as regards the discharge into the Thames of the sewage of the metropolis.

Colour Blindness in Pilots.

In reply to Mr. J. Talbot, Baron H. De Worms stated that he quite recognised the extreme importance of extending to pilots the obligation to pass the examination as a test of colour blindness which was now binding upon other officers of the mercantile marine, and that the endeavours of the Board of Trade would not be discontinued as opportunities occur from time to time to induce all pilotage authorities to include in their examinations of pilots so obvious and necessary a test.

The Housing of the Working Classes.

On the same day (the 10th inst.) Sir R. Cross moved the second reading of the Dwellings of the Working Classes Bill, and pointed out that there were two evils to be dealt with, the overcrowding of houses within a certain area, and the insanitary condition of the houses themselves. Mr. L. Stanley and Mr. Broadhurst regretted that the subject was being dealt with in a piecemeal fashion, and expressed a fear that by bringing it forward this session a more comprehensive measure may have been delayed. Mr. Collings, while approving of the Bill as far as it went, criticised its incompleteness, and recommended its postponement. Mr. Monckton briefly dealt with the clauses relating to sanita-

tion, and especially objected to liability for inefficient sanitation being thrown upon the landlord. Sir C. Dilke, Mr. Holland, Mr. Shaw-Lefevre, Mr. A. J. Balfour, and others having spoken, the Bill was read a second time, and the committee fixed for the following day.

On the 11th inst., the House having gone into committee on the Bill, an amendment by Mr. Holland on clause 3, which disposes of the metropolitan prison sites, with the object of deferring the subject until another session, after a prolonged and animated discussion, was negatived by 69 to 20. An amendment by Sir R. Cross, providing that the prison sites shall be sold at a fair market price, to be settled by agreement or arbitration, was agreed to with the further addition, "having regard to the object for which they are to be used." On the question that the clause stand part of the Bill, the objections to its principle were urged by Mr. A. Grey. Sir C. Dilke pointed out that the clause was necessary to enable the Government to sell the sites, and that similar powers had been given to owners of settled property. Several members having joined in the appeal to the Government to withdraw the clause, the Chancellor of the Exchequer said that if the division on the clause showed an increased minority the Government would not proceed with the clause. A division being taken, 75 voted for the clause, and 29 against it. The Chancellor of the Exchequer thereupon promised to strike out the provision as to market value on report. Clauses 4 to 12 were agreed to, with the exception of clause 9, which was omitted; and clause 13 was agreed to with an amendment limiting its operation to habitations occupied by the working classes. An amendment to clause 14, providing that the expression "cottage" should include an acre of garden instead of half an acre, was negatived on a division by 51 to 16; and ultimately the Bill passed through Committee.

On the 12th inst. the Bill was read a third time.

The Soudan Campaign.

On the 12th inst. the Marquis of Hartington, in supporting the vote of thanks to the forces engaged in the Soudan expedition proposed by Sir M. Hicks-Beach, said he believed that the perfection of the medical arrangements in this campaign had been the cause of mitigating to a great extent the unavoidable sufferings which must be endured on all occasions of this kind, and never had the devotion to their duty shown by the medical officers of every rank been exceeded.

Obituary.

AUGUSTUS BURKE SHEPHERD, M.D., F.R.C.P.

AUGUSTUS BURKE SHEPHERD was the son of a clergyman, who at one time held a country living, but afterwards resided in London. The subject of this notice was educated at Tunbridge School (?), and afterwards entered Brasenose College, Oxford. Here he was fortunate enough to obtain an exhibition especially intended for Lancashire students. Several members of his family were members of Brasenose, and known there, among other things, for their prowess as oarsmen. Augustus Shepherd was a moderate rower, and achieved no special distinction in this line. His favourite recreations as an undergratuate were music and poetry. In music he was himself a fair performer, and had the art of drawing out the talents of others, so that the musical evenings at his rooms were very popular entertainments of their kind. It may surprise those who knew Shepherd in later life to hear that he cherished a hidden vein of poetry; but when an undergraduate he was not without poetical aspirations, and wrote a good deal. Nothing of his apparently ever reached publication in a separate form, but sundry copies of verses could probably be dug out of the periodicals, in which the poetical efforts of undergraduates were then, as now, consigned to a decent obscurity. Besides this, his talent for versifying was called out for the purposes of the College. It used to be the custom at Brasenose to have a feast or gaudy on Shrove Tuesday, at which the famous old ale of the College was brought out. To celebrate the virtues of Brasenose ale, a copy of verses, assumed to be the composition of the butler, was produced; and on more than one occasion Shepherd's muse was called into requisition to supply it. Some of these compositions have actually been collected and printed in a volume with the title "Brasenose Ale," so it need only be said that Shepherd's verses were in good taste and happily caught the festive spirit thought appropriate to such occasions. There is one incident in his life of which mention must not be omitted, for by a single act we may judge of a man's character. A college friend was attacked with fever, probably typhus. Shepherd nursed his friend day and night, at great personal risk and with full knowledge of the danger. He was seized himself and nearly succumbed to the same disease. He happily recovered, with the satisfaction that he had contributed towards saving his friend.

Shepherd took a third class in Classics at Moderations in 1859, and after that gave himself to reading for the Natural Science schools, in which he took a first class. His exhibition permitting of his staying up after his B.A. degree, he employed his time in further medical and scientific study. In this way he was brought into close relation with Professor Rolleston, and an intimate friendship resulted. Rolleston had a great affection for Shepherd, and spoke of his character in the warmest terms. Few of the Professor's pupils could take greater liberties with him than Shepherd did, or used on occasions greater plainness of speech. Such freedom Rolleston's generous nature was very ready to bear from one who in thorough generousness of character resembled himself; though in other respects there was wide diversity between the two men. Shepherd also joined Rolleston's summer dredging parties for the study of marine zoology.

Shepherd left Oxford and his genial life there, carrying with him the universal goodwill of undergraduates, dons, and professors, and entered at Guy's Hospital. His chief friend and favourite teacher there was at first the late Dr. Barlow, but he soon showed his faculty for making friends, and was till the last on very intimate terms with his old teachers and fellow-students. After taking his M.B. degree at Oxford and the Membership of the College of Physicians in 1867, he obtained an appointment on the staff of the Victoria-park Hospital. In 1875 he was elected Fellow of the College and appointed to deliver the Gulstonian Lectures. His subject was the Natural History of Pulmonary Consumption, and the lectures were chiefly based on his experience at Victoria-park. Being written before the tubercle bacillus appeared above the horizon, these lectures may now seem out of date; but they will always have that undeniable value which belongs to important cases well observed and veraciously recorded. The book had the advantage of being illustrated in an unusually beautiful manner with chromolithographs and microscopical drawings. He also wrote for several years the Reports on Medicine in the Biennial Retrospect published by the New Sydenham Society. His long connexion with St. Mary's Hospital, as physician, lecturer on pathology, and dean of the school, gave him a prominent position in the profession.

THOMAS GERRARD SMALL, M.B. OXON.

To the survivors of a former and fast-disappearing generation, the name of this successful practitioner and estimable man will recall the Rome of fifty years ago, when it was the chosen resort of "the world's tired denizen"; when the hush of its grass-grown streets and piazzas, broken but by the perennial plash of the fountain, had a soothing charm for the weary and the wayworn in the race of pleasure or ambition; when, in sympathetic neighbourhood with fallen pillar, defaced statue, and ruined arch, the lotus-eaters of civilisation sought to forget or live down their abortive past, "on the Hills like gods together, careless of mankind." Now all this is changed. Rome has been hooked on to the express train of the nineteenth century, and is fast developing into the most modern of capitals. Gone for ever is the city of Byron and Sir Walter, of Thackeray and Father Prout. The Café Greco, the scene of many a wit-combat, is as much a thing of the past as the "Cave of Harmony." The *vetturino*, with "milordo Inglese" and suite, is now represented by the caravan of personally conducted tourists; and in the once weedy and silent Piazza di Spagna the newly arrived visitor has, like the Irishman, to "throw himself into a hollow square to resist charges of cabs."

Of that old and fast-fading city one of the most characteristic figures has disappeared in Dr. Gerrard Small, who died at Albano on the 3rd inst., just a week after his octogenarian contemporary, the painter Penry Williams. The Doctor was

born early in the century at Dublin, where he entered Trinity College as a student in arts. Having distinguished himself in that curriculum, he began the study of medicine under teachers who are still honoured as pillars of the Dublin school. In 1828 he became a Licentiate of the Royal College of Surgeons of Ireland, and in the following year Licentiate in Midwifery. On May 6th, 1833 (not 1844, as elsewhere given), he was admitted a Fellow of the College; while in 1834 he qualified and graduated as Bachelor of Medicine of the University of Oxford. For some six years he practised in his native city, and took a prominent part in the proceedings and debates of the College, distinguishing himself as a ready speaker and trenchant critic. But the malady—intestinal catarrh—which clung to him with varying severity to the close of his life began to declare itself, and by the advice of his colleagues he repaired in 1842 to Rome, where the climate so suited him that he was equal to all the demands of a physician's practice till 1875, when he retired in favour of Dr. J. P. Steele. As a practitioner he was intelligent and painstaking, while, especially in fever, he was highly successful, piloting his patient often through an archipelago of complications, and landing him, sometimes in spite of most perplexing sequelæ, safe and sound. He was among the first to propose (long before it found its way into the text-books), and certainly to practise, the mercurial purge—generally in the form of calomel—as preparative to a course of quinine; and on all his prescriptions there was the stamp of independent judgment, both in the combination and in the dose of their components. For wellnigh twenty years—from 1848 to 1868—he was without a rival in Roman practice, and when about the former year Dr. Pantaleoni, for political reasons, was expatriated, the chief cases, not in the Anglo-American community only, came into his hands, until towards the close of his career he could number among his former patients many of the most distinguished of the British aristocracy, to say nothing of celebrities on both sides of the Atlantic. With all this he was ever ready to put his services at the disposal of struggling artists and others of his compatriots who had fallen on evil days; while, over and above this gratuitous work, he never failed to respond to the appeal of charity when aid had to be organised for individuals or for families.

Dr. Gerrard Small was a man of unusually refined taste in literature and art; and at one stage of his career he had collected a number of paintings, originals or replicas, which were the envy of many a connoisseur. To all worthy visitors (by preference those of his own profession) he was a genial host, and his conversation, racy with anecdote and character, drew round him many an audience, often of former patients who, "cured yesterday of their disease," next evening "died of their physician." He had held his own with Thackeray and Father Prout in repartee, and with Gibson and Macpherson in art criticism. Indeed, his vivacity never flagged; and for months after he was confined to his room and his sofa, it was the delight of many a *confrère* or familiar to draw out "the old man eloquent" on the topics of the day. He committed little or nothing to print, and though his reputation is on that account less widely diffused than it might have been, it will be long before the English-speaking colony in the city of his adoption forgets the kindly old Doctor who sleeps in the Protestant cemetery by the legendary Tiber, under the Aurelian Wall.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examinations for the diploma, were admitted Members of the College at a meeting of the Court of Examiners on the 7th inst.:—

Ashley, Sydney Dukes, L.S.A., Leytonstone.
Codd, Henry Robinson, L.S.A., Leamington.
Collinson, Thomas Arthur, L.S.A., Granville-square.
Hassell, Edward Suter, L.S.A., Isleworth.
Holton, Francis William Parks, L.S.A., Kilburn.
Jones, John Lloyd Thomas, M.B. Durh., Tremadoc.

Admitted on the 10th inst.:—

Barrett, Robert Hasby, L.S.A., Dulwich.
Bray, Percy Dean, L.S.A., Bognor.
Hughes, John Douglas, L.R.C.P. Lond., Folkestone.
Hurlbutt, Spencer, L.S.A., Chippenham-road.
Scott, Patrick Cumin, Blackheath-park.
Waters, Avery Clough, L.S.A., Bow.

Admitted on the 11th inst.:—

Godfrey, Albert Edward, L.R.C.P. Lond., Northampton
Heffernan, William Hilton, L.S.A., Southsea.
Monk, Henry George Hawkins, L.S.A., Woburn-place.
Morris, Herbert Mackinlay, L.R.C.P. Lond., Percy-circus.
Pollard, George Richard McIntosh, L.R.C.P. Lond., Clapham.
Thornton, Edward, L.S.A., Shrewsbury.
Wrigley, Robert, L.S.A., Glendow-place.
Yeoman, Charles, L.S.A., Northallerton.

Admitted on the 12th inst.:—

Alexander, Samuel Philip, M.B. Glas., Glasgow.
Bradbury, Harvey Kinnersley, L.S.A., Putney.
Cory, Isaac Rising, L.R.C.P. Lond., Clarendon-road.
Inman, George Arthur Ferdinand, L.S.A., Kew-gardens.
Reywood, John Robert Isaac, L.S.A., Thorn, near Doncaster.
Wallinger, Robert Naamyth Arnold, L.R.C.P. Lond., Brighton.

There were 339 candidates admitted to examination, of whom 95 obtained their diplomas; 96 passed in Surgery, and when qualified in Medicine and Midwifery will be admitted Members of the College. Of these candidates, 24 were referred for three months, 115 for six months, 4 for nine months, and 5 for one year. Fifty-nine candidates, having obtained Medical qualifications and previously passed in Surgery, were also admitted Members.

[In our last issue, for "Thane, George Herbert, Montague-street," read "Thane, Edgar Herbert."]

UNIVERSITY OF LONDON.—The following gentlemen have passed the Intermediate Examination in Medicine:—

ENTIRE EXAMINATION.

FIRST DIVISION.

Abram, John Hill, University College, Liverpool.
Ashe, Evelyn Oliver, London Hospital.
Ashworth, Percy, B.Sc., Owens College.
Bannister, Marmaduke, Owens College.
Black, George, Guy's Hospital.
Brock, Ernest Henry, Guy's Hospital.
Carter, Robert James, King's College.
Colman, W. Stacy, University of Edinburgh and University College.
Cook, Samuel Bird, St. Thomas's Hospital.
Crook, Herbert Evelyn, Guy's Hospital.
Cronch, Charles Percival, St. Bartholomew's Hospital.
Cuff, Herbert Edmund, Guy's Hospital.
Dean, Henry Percy, B.Sc., University College.
Deanesley, Edward, University College.
Duncan, Horace, St. Thomas's Hospital.
Fawssett, Frank, St. Thomas's Hospital.
Fisher, Theodore, Guy's Hospital.
Gifford, George Taylor, King's College.
Gilchrist, Thomas Caspar, Owens College.
Jecks, Cyril William, University College.
Johnson, Harold, St. Bartholomew's Hospital.
Kanthack, Alfredo Antunes, B.A., University College, Liverpool.
Lang, George Herbert, University College.
Ledward, Milton Prentice, Owens College.
Maillard, William Job, Guy's Hospital.
Marriott, Hyde, B.Sc., University College.
May, William Page, B.Sc., University College.
Melland, Brian, Owens College.
Mumford, Alfred Alexander, Owens College.
O'Reilly, George Hartley, King's College.
Randall, Ernest Bidgood, University College.
Rennie, George Edward, B.A. Sydney, University College.
Roberts, John Lloyd, B.A., B.Sc., Guy's Hospital.
Roper, Harold Kennaway, Guy's Hospital.
Sadler, Ernest Alf., Queen's and Mason Colleges, Birmingham.
Sansom, Harry Arthur, St. Thomas's Hospital.
Sawyer, Ramon Alexander, Guy's Hospital.
Scott, Arnold, Guy's Hospital.
Slater, William Arnison, B.Sc., Guy's Hospital.
Smith, Guy Bellingham, Guy's Hospital.
Solly, Reginald Vaughan, St. Thomas's Hospital.
Starling, Ernest Henry, Guy's Hospital.
Stocks, William Percy, Owens College.
Symonds, Henry, St. Bartholomew's Hospital.
Taylor, Frederick Howard, London Hospital.
Tubby, Alfred Herbert, Guy's Hospital.
Tunstall, John Ogle, University College.
Wilkie, John, St. Bartholomew's Hospital.
Williams, William Griffith, St. Bartholomew's Hospital.

SECOND DIVISION.

Baxendell, Arthur, Owens College.
Bays, James Thomas, St. Mary's Hospital.
Byrett, Lewis Thomas Fraser, King's College.
Bueno de Mesquita, Solomon, Guy's Hospital.
Buist, James Joseph, St. Bartholomew's Hospital.
Burt, Cyril Cecil Barrow, Westminster Hospital.
Calvert, John Telfer, St. Thomas's Hospital.
Canney, Henry Edward Leigh, University College.
Coryn, Herbert Alfred William, Charing-cross Hospital.
Gill, Rainsford Foster, University College.
Grenfell, Wilfred Thomason, London Hospital.
Haring, Nathan Charles, Owens College.
Hastings, Edwin Birchall, University College.
Hensley, Arthur Egerton, King's College.
Kelsall, Henry Truman, London Hospital.
Macdonald, Isabella Macdonald, London School of Medicine for Women.
Mair, Ludovic William Darra, St. Bartholomew's Hospital.
Moss, Enoch, Guy's Hospital.
Pope, Henry Alexander Lephthairia, King's College.

Randall, Philip Nicholas, Guy's Hospital.
Redfern, John Joseph, Queen's College, Belfast.
Relton, Bernard, St. Thomas's Hospital.
Rossall, Joseph Crofts, St. Mary's Hospital.
Routh, Charles Frederic, Guy's Hospital.
Sarjant, Frank Percy, Guy's Hospital.
Snell, Ernest Hugh, Queen's and Mason Colleges, Birmingham.
Stiles, Theodore Mayo, Bristol Medical School.
Tidey, Stuart Alexander, St. Mary's Hospital.
Vincent, Herbert Edmund, Guy's Hospital.
Ward, Howard Percy, King's College.
Webb, Helen, London School of Medicine for Women and Royal Free Hospital.
Williams, John Price, Owens College.
Yunge-Bateman, Marcus George, Guy's Hospital.

EXCLUDING PHYSIOLOGY.

FIRST DIVISION.

Althorp, Charles Frederic Manning, Leeds School of Medicine.
Giles, Arthur Edward, Owens College.
Gould, John Edwin, University College.
Harris, Frances, London School of Medicine for Women.
Moynihan, Berkeley George Andrew, Leeds School of Medicine.
Shaw, John Alexander, University College.
Spink, Christopher Pierson, Leeds School of Medicine.
Spreat, Frank Arthur, St. Bartholomew's Hospital.
Tressidder, William Elliott, Guy's Hospital.
Winterburn, Joseph Williamson, St. Thomas's Hospital.

SECOND DIVISION.

Abbott, Frederick William, Charing-cross Hospital.
Barlow, George, Owens College.
Bowman, Richard Oxley, Owens College.
Brown, Arthur Thomas, Guy's Hospital.

PHYSIOLOGY ONLY.

SECOND DIVISION.

Kelson, William Harry, London Hospital.
Oliver, Charles Pye, Charing-cross Hospital.
Risdon, William Newt, Guy's Hospital.
Stewart, Arthur Hastings Lanfear, St. Mary's Hospital.

BRITISH MEDICAL SERVICE.—The following is a list of surgeons on probation in the Medical Department of the British Army who were successful at both the London and Netley examinations. The marks shown are those which were gained at the London examination; the order of position of these gentlemen is not affected by the marks gained at the Netley examination:—

First Half-session, ending June 1st., 1885.

	Marks.		Marks.
*S. Hickson	2540	G. G. Adams	2130
H. J. Fletcher	2480	J. M. F. Shine	2120
S. H. Lindeman	2445	W. B. Day	2110
E. Davis	2430	D. R. Hamilton	2100
†S. Powell	2410	‡R. G. Thompson	2080
F. W. C. Jones	2335	C. T. Blackwell	2070
J. Meek	2330	J. R. Power	2070
A. E. Morris	2310	C. R. Kilkelly	2065
E. Cormack	2300	W. H. Bean	2020
J. F. McMillan	2290	N. C. Ferguson	2010
C. O'Donel	2275	S. R. Wills	1980
W. A. Carte	2270	M. L. Hearne	1960
A. O. Fitzgerald	2270	S. L. Deeble	1950
F. D. Elderton	2260	R. H. Hall	1950
E. N. Sheldrake	2230	W. H. Bennet	1940
R. E. Molesworth	2220	J. H. Greenway	1921
J. W. P. Long	2215	R. G. Hanley	1880
C. L. Josling	2210	W. H. Bell	1875
J. F. Bateson	2180	G. Cree	1850
W. T. Swan	2180	S. G. Philson	1850
J. Bulfin	2175	J. M. Nicolls	1830
R. L. Macleod	2145	F. W. H. D. Harris	1800
J. H. Curtis	2140		

* Gained the Herbert Prize of £20, the Prize in Pathology, and the Prize presented by Sir Joseph Fayrer.
† Gained the Martin Memorial Gold Medal.
‡ Gained the Parkes Memorial Bronze Medal and Montefiore Second Prize.
Mr. H. J. Dyson, of H.M.'s Indian Medical Service, gained the Montefiore Medal and a Prize of 20 guineas.

Second Half-session, ending August 3rd, 1885.

	Marks.		Marks.
J. F. McMillan	2290	H. G. Hathway	1620
S. G. Allen	1863	A. L. H. Dixon	1610
J. S. Green	1847	C. G. Woods	1610
G. H. Symes	1840	P. J. Nunnerly	1600
C. A. Lane	1775	B. A. Maturin	1580
P. C. H. Gordon	1770	H. V. Dillon	1570
L. T. M. Nash	1770	T. Daly	1550
J. H. Brannigan	1755	J. M. Sexton	1540
M. O'Halloran	1745	T. H. Baylor	1530
C. S. Sparkes	1740	H. E. Cree	1520
W. H. Pinches	1720	F. L. Carte	1520
H. F. Horne	1720	W. H. Starr	1500
J. H. Daly	1710	A. A. Sutton	1500
G. J. A. Tuke	1710	A. P. H. Griffiths	1460
P. de B. Skerrett	1700	W. S. Boles	1450
H. C. Dent	1680	H. L. G. Chevers	1440
J. F. Greig	1630	F. J. W. Stoney	1433
C. Hayden	1620	J. F. G. Burke	1390
H. D. Rowan	1630	H. N. Kenny	1350
H. Carr	1625		

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—The following gentlemen passed the final examination for the triple qualification, and were admitted L.R.C.P. Ed., L.R.C.S. Ed., and L.F.P.S. Glas.:—

Alexander, Andrew, Berwick.
Bryant, Henry Wm., Edinburgh.
Clarkson, Edward, Darlington.
Clegg, Wm. W., Leeds.
Donaldson, J. Blair, Edinburgh.
Gandevia, M. M., India.
Garrett, T. J. G. Manchester.
Macgibbon, Walter, Edinburgh.
Oust, Arthur R. Blackheath.
Rademeyer, H. N., South Africa.
Sturrock, David, Edinburgh.
Winter, John T., Manchester.

The following were admitted L.R.C.P. Ed. and L.F.P.S. Glas.

Bezbaroa, G. C., Glasgow.
Kerr, Robert, Glasgow.

SOCIETY OF APOTHECARIES.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on the 6th inst.:—

Christmas, Charles Dean, Weltje-road, Hammersmith.
Codd, Henry Robinson, M.R.C.S., Willes-road, Leamington.
Finch, Richard Tanner, M.R.C.S., Roehampton.
Hurlbutt, Spencer, M.R.C.S., Chippenham-road, Kennedy, Angus Ross, Glasgow.
Stevens, James Jesse William, High-street, Strood, Rochester.
Tweed, Edward Reginald, Upper Brook-street.

On the same day the following gentleman passed his examination in the Science and Practice of Medicine, Surgery, and Midwifery, and received a certificate to practise:—

Le Quesne, Ferdinand Simeon, King's College Hospital.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Briant, Arthur J., Liverpool-road Infirmary School of Medicine.
Crowther, Astley Brodie, Manchester-road Infirmary School of Medicine.
Ellis, William, St. George's Hospital.
Meadows, Naunton Wingfield Walford, Guy's Hospital.
White, Francis Silva, University College.

The following gentlemen have been elected members of the Court of Examiners of the Society of Apothecaries for the ensuing year:—Henry Bullock, F.R.C.S.; Henry A. Crocker, M.D. Lond.; Robert Fowler, M.D. Edin.; F. de Havilland Hall, M.D., F.R.C.P. Lond.; Robert J. Lee, M.D. Camb., F.R.C.P. Lond.; W. Withers Moore, M.D. Edin., F.R.C.P. Lond.; John S. Stocker, M.D. Lond.; John C. Thorowgood, M.D., F.R.C.P. Lond.; Francis Warner, M.D., F.R.C.P. Lond.; Andrew Clark, F.R.C.S.; G. H. Makins, F.R.C.S.; W. J. Walsham, F.R.C.S.

THE St. Thomas's Churchyard and Vaults in Dublin have, by order of the Local Government Board, been closed against any further interments.

THE "Australian Medical Journal" says great opposition on the part of the residents in the neighbourhood has been excited by the proposal to establish a temperance hospital in East Melbourne.

ON the 10th inst. the heat was more severe in Paris than on any previous day in this hot season. The *Soir* states that forty-six deaths from cerebral congestion occasioned by the heat took place at Bone in four days.

THE position of Pathologist to the Adelaide Hospital, Australia, has been offered to Dr. Watson, the Professor of Anatomy at the Adelaide University, who, it is understood, is willing to accept it.

BEQUESTS.—Mrs. Donoche has left £300 to the Mater Misericordiæ Hospital, £300 to the Children's Hospital, and £300 to the Deaf and Dumb Institution at Cabra. Mr. Charles Crotty has bequeathed £100 each to the Mater Misericordiæ and Mercer's Hospitals, Dublin.

A YOUNG Vienna doctor has, it is stated, just lost his life while ascending one of the Dauphine Alps. The deceased was an experienced tourist, and only a few days ago had published a *brochure* on the perils of Alpine climbing.

AT Belfast this week a person named Thompson, who has been in business in that town as a chemist, was charged with having forged a certificate that he had passed the matriculation examination of the Royal University of Ireland. The accused has been remanded on bail.

LIMA ACADEMY OF MEDICINE.—The Lima Académia Libre de Medicina has elected the following officers for the coming year:—President: Dr. Manuel Odriozola. Permanent Secretary: Dr. José C. Ulloa. Annual Secretaries: Drs. Manuel C. Barrios and Antonio Perez-Roca.

DURING the June quarter the returns of pauperism furnished by the Local Government Board for Ireland, as compared with the corresponding quarter of 1884, show a decrease of 1481 in the average number of workhouse inmates on Saturdays, and a decrease of 189 in the average number of persons on out-door relief.

RECOGNITION OF SERVICES IN THE CAUSE OF SANITATION.—Mr. Mark H. Judge, whose name is well known to members of the medical profession from his connexion with the Parkes Museum, has been publicly presented with an address and a gold watch by Mr. Eugene Collins, M.P., Mr. Daniel Grant, M.P., Mr. George Palmer, M.P., and others, in recognition of his devotion to the improvement of the moral, social, and sanitary condition of the community.

ARTIFICIAL HONEY.—One of the latest American novelties is artificial honey—that is, honey adulterated with a syrup manufactured from maize, the method being as yet a secret. Experiments on the subject show, however, that if wheat or maize starch (not potato starch) be treated with oxalic acid, or any other powerful organic acid, a syrup is produced which in a certain concentration, and after standing two or three weeks, exactly resembles in taste and appearance an old honey.

ADMIRALTY APPOINTMENTS.—The following appointments have been made:—Fleet Surgeon T. Henry Knott, to the *Malabar;* Staff Surgeon Albert Charles Queely, to the *Conquest;* Staff Surgeon John B. B. Triggs, to the *Urgent;* Staff Surgeon William Hayes, to the *Express;* Staff Surgeon William J. B. Bookey, to the *Royal Adelaide;* Surgeon Jas. W. H. Hawton, to the *Wye;* Surgeon John L. Bagnell Oakeley, to the *Minotaur;* Surgeon Clement Alsop, to the *Lion.*

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—The Annual General Meeting of this Association was held at Queen's College, Cork, on the 4th of August, under the presidency of Dr. J. A. Eames. After a vote of thanks to Dr. Rayner, the retiring president, Dr. Savage, of Bethlem Hospital, was elected president for the next year. The Association considered and approved of a scheme for the granting of certificates in Psychological Medicine, and a paper was read by Dr. Hack Tuke on a case of Moral Insanity. At the adjournment for luncheon a visit was paid to the Cork District Lunatic Asylum, which contains nearly 1000 patients, and which includes, among other well-ordered arrangements, a very complete system of Turkish baths. At the afternoon sitting an address was delivered by Dr. Eames, and the members of the Association afterwards dined together at Queenstown, which rising place, it was stated, had never before been chosen for a scientific association's meeting. On the following days excursions were made to Killarney and other places.

IRISH GRADUATES' ASSOCIATION.—The eighth annual meeting of this Association was held on the 29th ult. at Cardiff, when Dr. H. Macnaughton Jones, F.R.C.S.I., took the chair on his election as president for the ensuing year. A new code of rules was passed, on the suggestion of the Council, by whose recommendation the name was changed to "The Irish Medical Schools and Graduates' Association." It was arranged that in future there should be two meetings annually—one in London and one in the provinces,—the meeting on St. Patrick's Day in London to be the annual one. The annual report showed a great increase in the number of members, they being now 265, or more than double the total they were when the meeting took place in Belfast in 1884. The honorary treasurer's report showed a balance in favour of the Association of upwards of £33. The annual dinner took place the same evening, under the presidency of Dr. Macnaughton Jones. There were also present Dr. Stein (New York), Professor Cuming, M.D. (Belfast), Dr. J. S. Bristowe, F.R.S., Mr. Lawson Tait, Dr. Hack Juke, Mr. Ernest Hart, Professor Balthazar Foster, Dr. A. H. Jacob, Dr. Andrew Davies, Professor Bennett, F.R.C.S.I., and several ladies.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ACKLAND, W. R., L.D.S.Eng., has been appointed Demonstrator to the Dental Hospital of London, vice William Hern, resigned.

BEEVOR, C. E., M.D.Lond., M.R.C.P., has been appointed Physician to Out-Patients to the Great Northern Central Hospital.

BRUNSKILL, ROBERT DOVE, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Cornforth District of the Sedgefield Union, vice Clark, deceased.

BULLOCK, J. G. WRIGHT, L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer to the Rugby Union Workhouse, and Medical Officer and Public Vaccinator to the Rugby District.

COLMER, PTOLEMY S. H., M.D.Durh., L.R.C.P.Ed., L.F.P.S.Glas., has been reappointed Medical Officer and Public Vaccinator for the No. 2 District of the Yeovil Union.

DOUGLAS, ALLEN EDWARD, M.D. St. And., F.R.C.S.I., has been appointed Medical Officer to the Floating Hospital, Warrenpoint, in the Newry Union.

GRANT, DAVID, M.B., C.M.Ed., has been appointed Assistant Medical Officer to the Hospital for the Insane, Callan-park, New South Wales.

HOOKER, CHARLES PAGET, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the South District and Workhouse, Cirencester Union, vice Wilson, resigned.

JACK, ROBERT NELSON, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Health Officer for the Shire of Stawell, Victoria.

JOLIFFE, A. R., M.R.C.S., L.S.A.Lond., has been appointed Senior House-Surgeon to the Cheltenham General Hospital, vice Dr. Power, resigned.

LAW, JOHN SPENCE, M.B., C.M.Ed., has been appointed Clinical Assistant to the Borough Asylum, Winson-green, Birmingham, vice Macandrew, resigned.

MACANDREW, HERBERT, M.B., C.M.Ed., has been appointed Junior Assistant Medical Officer to the Salop and Montgomery Counties Asylum, vice C. H. Hale, M.R.C.S., resigned.

SHIRLAW, JAMES L., M.B., C.M.Ed., has been appointed Medical Officer for the Ferryhill District of the Sedgfield Union, vice Clark, deceased.

SMITH, LLOYD G., M.B., C.M.Ed., has been appointed House-Surgeon to the Deaconesses Institution and Training Hospital, Tottenham.

TOMKINS, HENRY, M.D.Q.U.I., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer of Health for Leicester.

TRESIDDER, EDWARD STANLEY, L.R.C.P.Lond., M.R.C.S., has been appointed Government Medical Officer and Public Vaccinator for the District of Coonamble, New South Wales.

WILDING, WILLIAM A., L.K.Q.C.P.I., M.R.C.S., has been appointed Medical Officer for the First District and Workhouse, Church Stretton Union, vice Hughes, resigned.

Births, Marriages, and Deaths.

BIRTHS.

DEWAR.—On the 8th inst., at Sloane-street, S.W., the wife of John Dewar, L.R.C.P.Ed., of a son.

JACKSON.—On the 12th inst., at Lansdowne House, Tottenham, the wife of G. H. Jackson, Surgeon, of a daughter.

SAUNDERS.—On the 9th inst., at Denburn, Crail, Fife, the wife of F. A. Saunders, F.R.C.S., L.R.C.P., of a daughter.

SIM.—On the 1st inst., at Affleck House, Forfarshire, the wife of Robert Sim, M.D., of a daughter.

SUTCLIFF.—On the 9th inst., at Great Torrington, Devon, the wife of Edward Sutcliff, M.D., of a son.

WOOLLERTON.—On the 3rd inst., at Sunnyside, Wendover, the wife of E. G. Woollerton, L.R.C.P.Ed., L.R.C.S.Ed., of a daughter.

MARRIAGES.

CHESTNUTT—CLOUGH.—On the 5th inst., at Howden, East Yorks, John Chestnutt, A.B., L.R.C.S.Ed., L.R.C.P.Ed., eldest son of the Rev. W. W. Chestnutt, of Tralee, Ireland, to Annie Elizabeth, younger daughter of the late Thomas Clough, Esq., of Malton.

EWART—TURNER.—On the 5th inst., at St. Michael's and All Angels', Paddington, James Cossar Ewart, M.D., Regius Professor of Natural History in the University of Edinburgh, to Edith Sophia, daughter of the late George Turner, of Sussex-gardens, Hyde-park.

TREADWELL—EAMES.—On the 6th inst., at St. Paul's, Upper Norwood, Oliver F. N. Treadwell, M.R.C.S., of Durham, only son of Richard Treadwell, of the Home Office, to Ellen Elizabeth (Nelly), youngest daughter of Alfred Eames, of The Knoll, Anerley-hill, Upper Norwood.

DEATHS.

GRIGG.—On the 4th inst., at Bedford-street, Covent-garden, Joseph Collings Grigg, F.R.C.S., in his 50th year.

SMALL.—On the 3rd inst., at Albano, Thomas Gerard Small, M.D., of Dublin, for many years resident in Rome, aged about 82.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Stewart's Instruments.)

THE LANCET OFFICE, Aug. 13th, 1885.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 8.30 a.m.
Aug. 7	29·80	W.	62	57	113	70	56	·02	Cloudy
,, 8	29·88	W.	64	58	118	73	55	·05	Cloudy
,, 9	30·20	S.W.	64	59	107	73	57	...	Cloudy
,, 10	29·67	S.W.	65	62	111	75	60	·02	Overcast
,, 11	29·74	W.	63	57	117	72	57	...	Cloudy
,, 12	29·85	S.W.	61	56	105	69	55	...	Cloudy
,, 13	29·96	W.	57	52	...	...	52	·07	Cloudy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editor."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Local papers containing reports or news-paragraphs should be marked.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

PAYMENT OF MEDICAL MEN BY RESULTS.

IT will doubtless be remembered that His Highness the Maharajah Holker advertised last February in the *Times of India*, offering a large reward to any doctor, vidaga, or hakeem who should cure him of an illness he was suffering from. Applicants were to forward certificates of having effected previous cures, and would then, if summoned to Indore, where they might be required for eighteen months, receive six thousand rupees on account, and a further twelve thousand on the cure being completed. Three weeks since it was announced by another advertisement in the same paper that a medical man had been selected. The result of the treatment will be followed with much interest, owing to the distinction of the patient, the novel way of obtaining a doctor, and the introduction into the medical profession of the system of payment by results.

M.A., M.D., B.S., M.R.C.S.—We think good taste would dictate the use of the second and fourth only, as being the strictly professional qualifications.

A CASE OF SCROTAL HERNIA.

To the Editor of THE LANCET.

SIR,—The following notes may be of interest as illustrating the efficacy of simple means in the reduction of neglected hernial tumours.

A few weeks ago I was called in to see a middle-aged gentleman of active habits, who had been the subject of hernia for probably twelve years, but had done nothing for it until about ten months ago, when he was fitted with a truss. This appears to have retained the hernia for three months, but for six months before I saw him the rupture was allowed to remain unreduced, the truss being applied over it in spite of some local discomfort and the frequent occurrence of sickness after food. These symptoms becoming more troublesome, he applied for professional assistance, and on examination there was found a right scrotal hernia of moderate size, consisting apparently of intestine and some omentum, tense and slightly tender, but not inflamed. The bowels had been regularly relieved, but there was evidently faecal accumulation in the intestine, together with some gas. As prolonged taxis was unsuccessful, the patient was put on spare diet, and kept lying down with the knees bent and the scrotum well raised, and a dose of castor oil administered, resulting in a free evacuation. Taxis being again unsuccessful, the effect of an anæsthetic was tried, but with no better result. Castor-oil was then administered daily, and a hot bath and an ice-bag tried in turn, and on the sixth day I succeeded in reducing the hernia and securing it with a truss.

It is interesting to observe that for the last twelve years a week rarely passed without sickness after food; but since the reduction and efficient support of the hernia there has been no recurrence of this troublesome symptom. I am, Sir, yours faithfully,

Moorgate-street, Aug. 12th, 1885. F. R. WALTERS, M.D., F.R.C.S.

COCAINE MYDRIASIS ANTAGONISED.

THE paralysis of accommodation and the dilatation of the pupil caused by cocaine when used to anæsthetise the conjunctiva may not be desired. According to Dr. Bradford, a combination of pilocarpine and cocaine produces anæsthesia without altering the pupil or accommodation. Ten drops of a 4 per cent. solution of hydrochlorate of pilocarpine are added to a drachm of a 4 per cent. solution of hydrochlorate of cocaine in order to make the required agent.

Mr. A. J. Harvey.—Health lectures are already given in several towns. We must not be in too great a hurry. All kinds of progress, to be secure, must be gradual.

Mr. W. Taylor McComb.—We are making inquiries.

SUCCESSFUL REMOVAL OF BREAST IN A PATIENT AGED EIGHTY-SEVEN.

To the Editor of THE LANCET.

SIR,—As the subject of repair and recovery after operation in aged persons has recently been very prominently brought to the notice of the profession, I beg to append the following as a not wholly uninteresting case.

C. B——, aged eighty-seven, a widow, having had no children, of a light, spare, erect figure, consulted me on April 24th last respecting a growth in the left breast, which she asserted had been slowly gaining in size for the past twelve months. Careful interrogation elicited no hereditary history; she had lost a cousin (male) long ago who was supposed to have died of cancer. I may as well state here that the patient comes of a long-lived family. She has at this moment brothers living, one a year younger, the other a year older, than herself. On examining the growth, I found a smooth, hardish, unyielding lump, the size of a walnut, flattened in shape, with the angles rounded off. It was situated above and to the outer side of the nipple, apparently independent of gland structure, and freely movable beneath the skin. In spite of repeated handling, there was no pain, and the axillary glands were not involved. On May 4th (ten days after) I examined her with Mr. Durham, and was surprised at the rapid growth in so short a time; the skin was now distinctly puckered, though there was no retraction of the nipple. Taking into consideration the old lady's hardy constitution (she was a native of North Ireland) and strictly temperate life, Mr. Durham recommended removal. After due reflection, having had the facts *pro* and *con.* distinctly placed before her, she, as the sequel proved, wisely assented.—May 8th: The patient being placed under ether by Mr. Braine, the incision was made in the usual way, the tumour being torn from its bed, assisted by some light touches of the knife. There was no bleeding, only a little venous oozing. Antiseptic precautions were used, the wound being dressed with Friar's balsam, and a piece of amadou strapped over the lower flap for support. Over the whole was placed a large jacket of cotton-wool. The patient was rather sick after the ether, but this was soon relieved by potass and soda water.—13th: The dressings were removed; the wound was uniting by first intention, without a single drop of discharge.—15th: The thermometer suddenly went up, but soon resumed the normal on removing a little discharge from the drainage hole in the lower flap.—June 18th: The skin perfectly healed; the solid and entire adhesion of the flaps was slightly retarded by the fact that the patient had an unfortunate habit of jerking her left arm during sleep, thus disturbing the parts. The temperature, however, never rose (except as mentioned above), and the patient's sleep was uninterrupted from beginning to end. The tumour proved to be cystic, with vegetations of an epitheliomatous type.

I have not looked up any surgical authorities or reports to find similar cases, but I am sure they are sufficiently few to warrant my reporting this. Mr. Erichsen has, I believe, somewhere mentioned the case of a patient aged ninety-six upon whom he operated, but I forget the result. There can be no doubt that after a certain age very great caution must be exercised, and each case treated on its own individual merits. Now, my patient was very "irritable"—*i.e.* childishly sensitive, an exaggerated condition of pleasure or pain being produced by the merest trifles; although physically her health was perfect, and she recovered. I have in my mind another patient suffering from the same disease, of a fat, flabby build, but whose mind was calm, placid, and self-possessed; yet, to perform the operation on her would have been manifestly unscientific. The surroundings in the case of my patient were very encouraging. The room was fairly large, bright and well ventilated, looking over Epping Forest, and, as I have said before, the patient slept well and preserved her appetite. It has been commonly remarked by those who know her best that she looks far better after the operation than she had done for the last two years. I am, Sir, your obedient servant,

Surrey-street, W.C., July 27th, 1885. J. RUSSELL HARRIS.

FILTERS AND FILTERING MEDIUMS.

To the Editor of THE LANCET.

SIR,—In your issue of the 1st inst. I observe a notice of a new filter, and that you recommend coke as a filtering medium, quoting Frankland's experiments.

In October of last year I patented a filter, of which I enclose you a circular, and in which I use coke as the basis of the filtering medium. In spite of being a powerful germicide, however, it is unfit for use alone, as it often contains soluble sulphides and other impurities.

I am, Sir, yours faithfully,

Loughborough, Aug. 7th, 1885. WILLIAM PAULSON, L.R.C.P.Lond.

VITAL STATISTICS OF LIMA.

DURING the first quarter of the present year the vital statistics of Lima give the total deaths as 1072, of which 68 were due to small-pox, 2 to yellow fever, and 202 were without medical aid. The deaths from small-pox in April are returned as 13, showing a diminution from those due to this cause in February and March, but it is doubtful if this number is accurate.

Audi alteram partem had perhaps better address the editors of the papers in which the alleged erroneous statements appeared.

A CASE OF SMALL-POX ABORTED BY VACCINE.

To the Editor of THE LANCET.

SIR,—On the evening of April 12th last I was called to see C. R——, a domestic servant, aged twenty years, with the following history:—She had come to this situation on April 1st, feeling well; but at the end of a week she began to complain of lassitude and headache, and on the 10th and 11th these were accompanied by sickness and pain in the throat, back, and limbs. On the 12th a few papules appeared on the forehead, neck, and body, and on the legs were large red patches. When seen in the evening the girl said she was "all right, except for the spots." From the symptoms and the character of the papules a mild form of small-pox was diagnosed. The girl was removed next day to the small-pox hospital, and the other inmates of the house were revaccinated. C. R——'s fellow-servant, C. L——, eighteen years of age, who had occupied the same bed up to the 11th, complained at the time she was revaccinated of loss of appetite, and her arms were noticed to be rough, which she said was unusual. Next day (the 14th) she had severe pain in the back, the tongue was thickly furred and the fauces inflamed, with four small painful raised spots visible; temperature in right axilla 103° F. The patient had been excited and delirious during the night. On the 15th several papules were seen on the face, and the pain was not so severe. Meanwhile the left arm was becoming red and swollen at the seat of vaccination, which was evidently "taking." On the 16th the hard papules on the face were disappearing, and the skin of the legs and arms was desquamating slightly. The pain in the back continued until the 19th, by which time large vesicles had formed on the vaccinated arm, the four large pocks looking more like the result of a primary than a second vaccination. In a couple of days the pocks were at their height, and, with the exception of some swelling of the axillary glands and general weakness, the patient felt comparatively well. The skin very soon became clear and smooth, and she was able to resume her usual employment in a fortnight from the first appearance of the small-pox symptoms. On the others (four persons) in the house the vaccine took full effect. No other cases of small-pox have occurred in the house or vicinity since.

No cases of small-pox had been known in the neighbourhood for several months; and as the incubation stage is of about twelve days' duration, it was presumed that C. R—— had been exposed to the infection previously to her taking the situation on April 1st. On the 12th the papules appeared; so that, allowing two days for the stage of invasion and twelve for that of incubation, it is probable she was exposed to the infection about March 20th. C. L—— slept in the same bed with C. R—— until April 11th, and, making the same allowances, possibly the poison entered her system the first night C. R—— slept with her. Even if the stages were shorter, it still shows that the infection may be communicated at a very early stage of the disease. A more important point is the action of vaccine as an antidote to small-pox. It has been asked, Is it worth while to vaccinate a patient who is beginning to show symptoms of small-pox? This case (C. L——'s) answers the question to the effect that small-pox may be checked, if vaccination be done with good lymph, even as late as the end of the incubation stage or the beginning of that of invasion. In this case, from the severity of the prodromal symptoms, the attack of small-pox would have been a correspondingly severe one; and this is borne out by the large typical vaccine vesicles produced, showing the great susceptibility of C. L—— to the small-pox poison. Evidently, it was the more rapid development of the vaccine which saved the patient from a virulent attack of the more slowly growing small-pox. I am, Sir, yours obediently,

London, July, 1885. FRANCIS J. ALLAN, M.D.Edin.

PTYALISM IN PREGNANCY.

To the Editor of THE LANCET.

SIR,—Lusk, in his work on Midwifery, p. 121, recommends "small doses of atropia and the twelfth of a grain of pilocarpine" for the salivation of pregnancy. I have always thought that these two drugs were antagonistic to one another; pilocarpine by its action on the terminal endings on the chorda tympani, producing *profuse salivation*. I have seen the same treatment recommended in another book on Midwifery. I should be very glad if any of your readers would explain the action of pilocarpine in this case.—Yours very truly,

August 13th, 1885. A MEDICAL STUDENT.

Mr. H. Warneford Thomson is referred to a letter in THE LANCET of June 27th last, p. 1189.

FIBROID LUNG.

To the Editor of THE LANCET.

SIR,—Will any of your readers suggest a remedy to arrest the expectoration in the above disease? All the usual remedies have been tried. Is such a case a proper one for Dover? No albuminuria.

I am, Sir, yours faithfully,

Aug. 11th, 1885. MEDICAL SUFFERER.

THE RODGERS FUND.

"IN MEMORY of a Former Patient" has forwarded £2 in aid of the above fund.

Mr. J. F. Sargent.—English cholera, sporadic cholera, cholera nostras, or choleraic diarrhœa, is generally held to be a purely distinct affection from Asiatic cholera, with which the former has no proved etiological relation.

Mr. G. Bullen.—The note was founded on an article in No. 7 of the third volume of the Journal, published by Wood and Co., Lafayette-place, New York.

THE BRADLEY FUND.

To the Editor of THE LANCET.

SIR,—I enclose a list of subscriptions promised and received towards the above fund. Will you kindly allow it to appear in the columns of your journal? I remain, Sir, yours faithfully,

Chesterfield, Aug. 12th, 1885. RICHARD JEFFREYS.

Sir Wm. Jenner, Bart., K.C.B.	£10	10	0
Sir Henry Thompson ...	10	10	0
Mr. Lawson Tait	10	10	0
Mr. Marston Buzzard, Q.C., M.P.	10	10	0
Sir Andrew Clark, Bart.	5	5	0
Mr. W. Adams	5	5	0
Sir Edwin Saunders ...	5	0	0
Dr. Robert Martin ...	5	0	0
Mr. George D. Pollock ...	5	0	0
Mr. C. J. Wheelhouse ...	5	0	0
Mr. Lennox Brown ...	3	3	0
Mr. Noble Smith	3	3	0
Medical Press & Circular	3	3	0
Mr. James W. Barry ...	3	3	0
Dr. Francis McLoughlin	3	3	0
Sir Wm. MacCormac ...	2	2	0
Mr. Jonathan Hutchinson	2	2	0
Dr. George Johnson ...	2	2	0
Dr. Martin D. Bartolome	2	2	0
Mr. W. Favell	2	2	0
Dr. Keeling	2	2	0
Mr. Arthur Jackson ...	2	2	0
Dr. W. R. Thomas ...	2	2	0
Mr. Simeon Snell ...	2	2	0
Mr. Henry Sewell ...	2	2	0
Dr. J. M. Kennedy ...	2	2	0
Dr. F. Richardson Cross	2	2	0
Mr. G. Booth, J.P. ...	2	2	0
Dr. J. P. Smith	2	2	0
Dr. Alf. Eddowes ...	2	0	0
Dr. Peter Redfern ...	1	1	0
Mr. Bernard M. S. Roth	1	1	0
Mr. P. H. Mules	1	1	0
Dr. J. Lawrence	1	1	0
Mr. D. B. Balding ...	£1	1	0
Dr. J. Barr	1	1	0
Mr. R. Bowes	1	1	0
Mr. Frank H. Hodges ...	1	1	0
Dr. W. P. Herringham ...	1	1	0
Dr. Roger Prosser ...	1	1	0
Dr. W. Collier	1	1	0
Mr. Wm. Martin	1	1	0
Dr. Geo. Brown	1	1	0
Dr. Wm. Benthal	1	1	0
Mr. A. H. Laver	1	1	0
Dr. H. A. Powell	1	1	0
Mr. H. Fearnside	1	1	0
Mr. Josh. A. Locking ...	1	1	0
Mr. Geo. Walter Tait ...	1	1	0
Dr. Louchlan Aitkin ...	1	1	0
Dr. W. A. Satchell ...	1	1	0
Dr. Balthazar Foster ...	1	1	0
Mr. John Bluett	1	1	0
Mr. Richard Jeffreys ...	1	1	0
Dr. J. M. Finch	1	0	0
Mr. J. Goodwin Shea ...	0	10	6
Dr. Thomas Morgan ...	0	10	6
Mr. J. B. James	0	10	6
Mr. Tom Nevill	0	10	6
Dr. Grif. Griffiths	0	10	6
Dr. J. F. Fry	0	10	6
Dr. J. B. Fry	0	10	6
Mr. G. P. Francis	0	10	0
Dr. De Vere Hunt ...	0	10	0
Dr. Josh. Rogers	0	10	0
Mr. Alfred Reckless ...	0	10	0
Mr. F. M. Corner	0	10	0
Dr. J. W. Buckle	0	10	0
Dr. J. S. Johnston ...	0	10	0

Mr. A. E. Lund.—1. Messrs. Williams and Norgate, Henrietta-street, Covent-garden.—2. Dr. Playfair's little book contains a good deal of information on the subject.

Dr. Gelston.—The name is Watson, not "Bosworth," and the letter referred to appeared in THE LANCET of July 4th, p. 50.

DEATH, AFTER TRACHEOTOMY, FROM FOREIGN BODY IN RIGHT BRONCHUS.

To the Editor of THE LANCET.

SIR,—The following case, interesting in itself, seems worthy of notice in connexion with one reported by Mr. Alexander Hodgkinson last week.

On April 29th I was called to see a fine little boy of eight months, who during perfect health was suddenly seized with dyspnœa. This happened at 2 P.M. I found him, ten minutes later, cyanosed and in great distress, the breathing strident but regular. As no relief followed an emetic and hot bath, and no foreign body could be felt or seen, I performed tracheotomy at about 4.30. Up to this time all I could decide was that the cause of the symptoms was a foreign body below the glottis. The only new evidence was œdema over and below the right clavicle. In other respects the child's condition remained unaltered up to the time of operating, except that he very gradually exhibited the usual prognostic signs of death from asphyxia. With some difficulty a tube was inserted into a layer of fat nearly an inch in thickness, making a deep wound. For an hour or so the patient seemed a little easier; but the noisy breathing remained. I explored the bronchi, but made nothing out. At last complete insensibility set in, and the poor little fellow died at 9 A.M., thirteen hours after the onset of symptoms. The necropsy showed the right bronchus occupied by an awn of straw, one inch and a quarter long. It was firmly wedged in the tube, the stiff sharp point having reached a secondary bronchus, while the blunt end appeared just above the junction of the primary tube with the lung. The lung itself was collapsed, but not absolutely.

I cannot resist the conclusion that the foreign body (which was part of some imitation thatch on a toy-house) was already in the bronchus before I arrived. But why did the child die so soon with one bronchus free? The only explanation I can offer is that irritation of the bronchial nerves caused death by some reflex influence.

During the operation I had the advantage of Dr. Bailey's help in giving chloroform. I am, Sir, yours truly.

Stroud-green, N., Aug. 3rd, 1885. J. H. SAWTELL, M.B. Lond.

"BERLIN AS A MEDICAL CENTRE."

IN answer to several correspondents, we may say that the above *brochure* is published by the New England Publishing Company, Sandyhook, Connecticut.

A. R. W.—The Charities Register and Digest, published by Longmans will give the information.

Mr. H. Robson.—The suggestion is by no means novel.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Prof. Wharton Jones, Ventnor; Dr. G. Johnson, London; Mr. R. Jeffreys, Chesterfield; Dr. Walters, London; Mr. Cantlie, London; Mr. C. Purvis; Dr. Spencer, Bristol; Dr. Macalister, Cambridge; Mr. C. Gross, London; Dr. Urban Pritchard, London; Mr. M. H. C. Palmer, Newbury; Mr. Paulson, Loughborough; Mr. Lankester, London; Mr. W. Thomson, London; Dr. Goodhart, London; Mr. Macandrew, Bicton Heath; Mr. Gribble, London; Mr. Bruce Joy, London; Dr. Braxton Hicks, London; Mr. A. J. Harvey, London; Messrs. Danielson and Co., London; Dr. G. Antal, Budapest; Mr. Sargent, Bedford; Mr. J. Wilson, Wanlockhead; Dr. Nelson Sizer, Brooklyn; Mr. H. O. Day, London; Dr. G. de Griffith, London; Mr. Holt; Dr. Atkinson, Surbiton; Dr. Timm; Mr. Gurner; Mr. Constable; Messrs. J. and A. Churchill, London; Dr. Monckton; Mr. O. Grady; Mr. N. H. Mason, Highbury; Mr. Sweeting; Mr. Saunders, Exeter; Mr. Drury, Teignmouth; Mr. Black; Dr. Hicks; Mr. Hughes, Hansworth; Dr. Aitkin, St. Mawes; Mr. Burgoyne; Mr. Coleman, Cardiff; Mr. Wylie, Belfast; Mr. Masefield; Dr. Masini, Quirachee; Mr. George; Dr. Kelly, Ennistorthy; Mr. Parker, Keighley; Mr. Hyde; Messrs. Lüller and Co.; Dr. Huggard, Geneva; Mr. White; Dr. Newell; Mr. Hiron, Shipston; Mr. Winchester; Mr. Gosling; Mr. Betts; Mr. Lamond, Glasgow; Mr. Richards; Mr. J. S. Buck, Bromley; Mr. C. B. Elliott, Geraldton; Messrs. Mayer and Meltzer; Dr. Harkin; Mr. Edgeton, Stroud; Mr. A. J. Newman, Bowness; Dr. W. Gilson, Kidderminster; Dr. Roughton, London; Dr. W. C. Grigg, London; Mr. Henry Lee, London; Mr. White, Wolverhampton; Mr. Earp; Dr. Thomas, Glasgow; Mr. Ryan; Mr. Warner; Mr. H. G. Hills, Wandsworth; Hawaün; M.R.C.S.E., L.R.C.P.Ed.; M.A.; B. H.; S. N. B.; Rejected; Holdrich.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Thavasse; Mr. Somerville, Lenham; Mr. W. Hay, Hull; Mr. Moor, Linkinhorne; Dr. Drinkwater, Sunderland; Mr. Shirtliff, Kingston-on-Thames; Mr. McClennon, Glasgow; Dr. Letters, Dundee; Mr. Bond, Sittingbourne; Mr. Halstead, Swindon; Mr. Holme; Mr. Durham, London; Mr. Burgess, Manchester; Mr. Bredin; Mr. Fell, Aylesbury; Mr. Harrison; Dr. Squire, London; Mr. Jackson; Dr. Farran, Morecambe; Mr. Tabernu, Wigan; Mr. Greenish; Messrs. Bosswell and Co.; Mr. Graydon; Dr. Fenwick; Mr. Whitaker; Mr. Spencer, Richmond; Messrs. McMackay; Mr. Bond, Borden; Mr. Strover, Girtford; Messrs. Higginbottom; Mr. Harris; Mr. Allsworthy; Dr. Jay, Leamington; Mr. Towel, Manchester; Mr. Theobald; Mr. Bunting, Notts; Mr. Hibbert; Dr. Juler; Mr. Barron; Mr. Booth; Mr. Dare; Mr. Davidson; Mr. Jackson; Mr. Gutch, Poole; H. Clerk; M.D.; Secretary, Yorks. College; X. Y. Z.; Theta; Birmingham General Hospital; B.; Morelight; C. M.; Chirurgien; F. T.; T. F. G.; Bayswater; Advenu; Medicus; F.S.A.; Sigma; H.; M.D.; F. S.; Secretary, Clayton Hospital; K. Y. R.; P.; Alpha; C. P. A.; B.; Confidentia; Suburb; E. M.; Rhubarb; Medicus; Æsculapius; Medical; M. D. O.

Hampshire Independent, Birmingham Daily Post, Church of England Temperance Chronicle, Northern Evening Express, Wharfedale Observer, Northern Whig, York Herald, Englishman, Aberdeen Daily Free Press, &c., have been received.

Medical Diary for the ensuing Week.

Monday, August 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M. Also on Thursdays at 3 P.M.

Tuesday, August 18.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 and Thursdays at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
ROYAL COLLEGE OF PHYSICIANS OF LONDON.—4 P.M. Dr. Goodhart Bradshawe Lecture on Morbid Arterial Tension.

Wednesday, August 19.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays at 1.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Skin Department: 9.30 A.M., on Tuesdays and Fridays.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M., and on Saturday at the same hour.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department: 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.

Thursday, August 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Surgical Consultations, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

Friday, August 21.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1.30 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, August 22.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M.
MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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